



Appendix A – Boring Logs

Boring Logs are available for review on CD provided.

Appendix A – Boring Logs

This section provides the boring logs to collect soil samples during the Cell 9 soil delineation activities South of the 100 building. Borings were advanced using hand augers and hollow-stem auger drilling rigs. Boring logs are provided in sequential order; first by subcell number, then by sampling identification number (e.g., DL01 through DL15).

The main lithologic group name with the appropriate group symbol is described at the top of each stratum. The main lithologic group is in capital letters and bold font. Minor variations within the soil stratum are called out at the approximate elevation in which they occur, and the main lithologic group is not repeated nor any variations above the one identified.

Fill is defined as non-native material (evidenced by color, texture, structure, or miscellaneous debris), other than the material GTEOSI used to backfill excavations, which is noted as 'backfill' in the logs.

A plus sign (+) is used in the 'Notes' or 'Remarks' column of the boring logs and indicates a depth above ground surface. A minus sign (-) displayed in the 'Depth (feet)' column has the same meaning (depth above ground surface) but is used due to program restrictions.

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	SIEVE SIZE*	MILLIMETERS	SIEVE SIZE*
SAND				
FINE	.075	#200*	0.42	#40*
MEDIUM	0.42	#40*	2.00	#10*
COARSE	2.00	#10*	4.75	#4*
GRAVEL				
FINE	4.75	#4*	19.1	3/4"*
COARSE	19.1	3/4"*	76.2	3"*
COBBLES	76.2	3"*	304.8	12"*
BOULDERS	304.8	12"*	514.4	36"*

* U. S. STANDARD * CLEAR SQUARE OPENINGS

GRADATION CHART

Notes:

1. Dual symbols are used to indicate borderline classifications or intermixed strata.
 2. Soil descriptions and classification are based on field observations, not on laboratory testing of soil physical properties.

3. When used on the boring logs, the following terms are used to describe the consistency of cohesive soils and the relative compactness of cohesionless soils:

Cohesive Soils	Cohesionless Soils
Very Soft	Very Loose
Soft	Loose
Medium Stiff	Medium Dense
Stiff	Dense
Very Stiff	Very Dense
Hard	

4. When used on the boring logs, the following terms indicate the volume percentage of the minor soil components estimated in the field based on visual observations:
trace: 1 to 10% little: 10 to 20% some: 20 to 35% and: 35 to 50%.

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch

Moist: Damp but no visible water

Wet: Visible free water, usually soil is below the water table

UNIFIED SOIL CLASSIFICATION SYSTEM AND KEY TO BORING LOGS

MAJOR DIVISIONS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
GRAVEL AND GRAVELLY SOILS		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
MORE THAN BOX OF COARSE FRACTION RETAINED ON NO. 4 SIEVE		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
SAND AND SANDY SOILS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
MORE THAN BOX OF COARSE FRACTION PASSING NO. 4 SIEVE		SM	SILTY SANDS, SAND-SILT MIXTURES
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS		ML	INORGANIC SILTS AND VERY FINE SANDS, POORLY GRADED SILTY SANDS, SILTY SANDS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, LEAN CLAYS
MORE THAN BOX OF MATERIAL IS FINER THAN NO. 200 SIEVE SIZE		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		MH	INORGANIC SILTS, SILTY SANDS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
HIGHLY ORGANIC SOILS		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
		PT	PEAT, MUCK, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

SOIL CLASSIFICATION CHART

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI; Hicksville, NY
Log of Boring: A20 - DL01
Date Drilled: 12/16/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen, Aimmee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			53	24	0.0	FILL , black, silty sand, some gravel, asphalt debris, dry 3" tan with orange followed by dark brown	
2							
3			41	24	0.0	Light brown, fine to medium sand, some silt, dry Black grading to reddish brown, sandy silt, some gravel, wood debris, moist	
4						Black, trace coarse gravel, Reddish brown, trace fine gravel	
5			7	18	0.0		
6						Brown, clayey SILT , trace coarse sand, hard, medium stiff, moist Hard	
7	ML					Yellow-brown	
8	GW		33	24	0.0	Light reddish brown, fine to coarse SAND and fine GRAVEL , dense, dry	
9	SM					Yellow-brown, fine to coarse, silty SAND , dense, moist	
10	SW		50	24	0.0	Light brown, gravelly, fine to coarse SAND , fine to coarse gravel, dense, moist Light reddish brown, some fine gravel, dense	
11	SP					Light brown, fine to medium SAND , trace coarse sand and cobbles, dense	
12	SW		40	14	0.0	Light brown with trace red, gravelly, fine to coarse SAND , fine to coarse gravel, dense, moist	
13	SP					Light brown, fine to medium SAND , some coarse sand and fine gravel, Coarse gravel at 12.5', dense, dry	
	GW		43	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL01

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimmee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	GW		35	18	0.0	Light brown, trace coarse gravel, moist	
15						Light reddish brown, trace coarse gravel, moist	
16	SW		38	24	0.0	Light brown, fine to medium SAND, some coarse sand and fine gravel, dense, moist	
17						Light brown, gravelly, fine to coarse SAND with fine gravel, some coarse gravel, medium dense, moist	
18	SP		28	16	0.0	Some coarse gravel at 20.5'	
19						Trace fine to coarse gravel	
20						Coarse sand from 23-24'	
21						Fine gravelly, trace coarse gravel, medium dense, dry	
22							
23			20	24	0.0		
24							
25			13	16	0.0		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: A20 - DL01
Date Drilled: 12/16/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen, Aimmee Clark



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		25	22	0.0	Light brown, fine gravelly, fine to coarse SAND , trace coarse gravel, medium dense, dry	
28			Moist				
29	SP		21	22	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
30			Dry				
31	GW		22	24	0.0	Light brown, fine to coarse SAND and fine GRAVEL , medium dense, dry	
32	SP		17	22	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
33						Trace coarse sand, medium dense	
34	SW		14	24	0.0	Light brown with trace dark red at 34', fine to coarse SAND and fine gravel, medium dense, moist	
35						Trace fine to coarse gravel	
36	SP		22	23	0.0	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
37	SW					Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
38	SP		22	23	0.0	Light brown, fine to medium SAND and fine gravel, some coarse sand, medium dense, moist	
39	SW		20	12	0.0	Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL01

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimmee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[Symbol]				Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
41	SP	[Symbol]	11	20	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
42						Dark brown, coarse sand with fine to coarse gravel, medium dense, moist	
43	SW	[Symbol]	22	22	0.0	Tan, fine to coarse SAND , trace gravel, medium dense, moist	
44						Tan, fine to medium SAND , medium dense, moist	
45			17	19	0.0	Brown laminations from 44.5-46'	
46	SP	[Symbol]					
47			11	20	0.0		
48	CL	[Symbol]				Light brown, sandy CLAY with tan and orange-brown, fine sand seams, stiff, moist	
49	SP	[Symbol]				Tan to light brown, fine to medium SAND , loose	
50	CL	[Symbol]	9	20	0.0	Light brown CLAY , some silt, trace fine sand, stiff, moist	
51	SP	[Symbol]				Tan, fine to medium SAND , trace clay, loose, moist	
52	CL	[Symbol]				Dense	
53	CL	[Symbol]				Tan to light brown, silty CLAY , hard	
54	SW	[Symbol]	49	20	0.0	Dark brown to orange-brown, fine to coarse SAND , trace silt and fine gravel, dense	
55	SP	[Symbol]					

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: A20 - DL01
Date Drilled: 12/16/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen, Aimmee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SP		70	20	0.0	Light brown, fine to medium SAND , trace clay and coarse sand, very dense	
	SW					Light brown, fine to coarse SAND , some gravel	
54						Tan, fine to medium SAND , very dense, moist Dense	
55			39	18	0.0		
56						1" reddish tan, silty fine sand at 55.5' Orange-tan, fine sand, trace medium sand	
57			40	19	0.0	Tan	
58						Very dense	
59	SP		55	20	0.0		
60						Medium dense	
61	SM		29	20	0.0	2 1/2" reddish tan, silty sand seam at 61'	
62						Very dense	
63			70	18	0.0		
64							
65			60	18	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL01

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimmee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, trace medium sand, very dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' bgs on 1/10/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 1/10/05
4. Analytical samples from 1-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			29	24	0.0	FILL, dark brown, silty, fine to coarse sand, some fine gravel, asphalt debris, moist	
2							
3	SM		22	24	0.0	Orange-brown grading to dark orange, silty, fine to medium SAND, some coarse sand and fine gravel, medium dense, moist	
4							
5			32	12	0.0	Dense	
6						Grading to light orange-brown, medium dense	
7	ML SP ML		20	20	0.0	1" black layer at 6.5' Brown, sandy SILT, medium dense moist	
8						Light brown, fine to medium SAND, some coarse sand and fine gravel, medium dense, moist	
9	SW		38	16	0.0	Brown, sandy SILT, medium dense, moist Orange-brown, fine to coarse SAND, some fine gravel, trace coarse gravel, dense, moist	
10	SP					Brown-red, coarse SAND, moist	
11			39	23	0.0	Orange-brown grading to light brown with trace red, fine to medium SAND, some fine gravel, trace coarse gravel, dense, moist	
12	SW						
13			44	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP					Light brown fine SAND , grading to fine to medium sand, trace fine gravel, dense, dry 1/2" coarse sand, fine gravel seam at 13.5', trace coarse sand to 14'	
15			41	15	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, dense, moist	
16	SW					Increasing coarse gravel	
17			51	15	0.0	Very dense	
18						No recovery from 18-26' (cobble at tip of spoon); lithology assumed to be the same as above and below	NA = Not available (no recovery)
19			37	0	NA		
20							
21			42	0	NA		
22							
23			36	0	NA		
24							
25			53	0	NA		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			44	15	0.0	Light brown, fine to coarse SAND, some fine to coarse gravel, dense, moist	
28						Trace coarse gravel, medium dense, dry	
29			29	16	0.0	Trace dark brown at 29.25'	
30						Trace fine gravel, coarse gravel grades out, moist	
31			26	23	0.0		
32						Dense	
33	SW		37	16	0.0	Trace brown and reddish brown laminations from 33-34'	
34						Some fine gravel, trace coarse gravel and reddish brown laminations to 36', medium dense	
35			28	16	0.0		
36							
37			15	18	0.0		
38							
39			23	15	0.0	Red layer from 38.7-39'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Light brown, fine to coarse SAND , some fine gravel, trace coarse gravel, medium dense, moist Brown and red laminations from 39.5-40' Brown with trace red, coarse gravel grades out	
41			27	23	0.0		
42						Tan, fine to medium SAND , fine sand, trace coarse sand and fine gravel, medium dense, moist Red, coarse sand seam at 41.25' Dark brown seams at 41.75' Reddish brown laminations at 1/2" intervals	
43	SP		21	19	0.0		
44						Dense	
45	SM SP ML		30	24	0.0	Reddish tan, silty SAND , dense, moist Tan, fine SAND , trace coarse sand and fine gravel, dense, moist Brown SILT , dense, moist	
46						Tan, fine SAND , trace silt, dense, moist	
47	SP		27	16	0.0	Medium dense Brown silt seams at 47' and 47.2'	
48	ML SM					Brown SILT , medium dense, moist Brown, fine to coarse, silty SAND , medium dense, moist	
49	CL		22	24	0.0	Brown, silty CLAY , very stiff, moist	
50	SM					Brown, silty SAND , some fine gravel, trace dark brown, fine to coarse sand, medium dense, moist Trace orange and coarse gravel, dense	
51	SP		47	22	0.0	1" dark brown, medium to coarse SAND , dense, moist Tan, fine sand	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			50	16	0.0	Tan, fine SAND, dense, moist	
54						Orange-tan, some silt	
55			37	20	0.0		
56	SM					Tan, silt grades out Trace red-brown inclusions, 1" orange silty sand seam at 56.25'	
57			30	18	0.0		
58	SP						
59			34	21	0.0		
60							
61	SM		36	22	0.0	2" orange, silty sand layer at 60.7'	
62							
63			44	23	0.0		
64							
65			45	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A20 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan with trace red-brown inclusions, fine SAND, dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' bgs on 1/10/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 1/10/05
4. Analytical samples from 1-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Asphalt and gravel	
1			8	18	0.2	FILL, brown, silty, fine to coarse sand, some fine to coarse gravel, moist	
2						Dark brown, sandy silt, some fine gravel, trace decomposing wood, moist	
3			13	24	0.0	Orange-brown, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
4	SW					Trace fine gravel, coarse gravel grades out	
5			21	20	0.0		
6						Orange-brown, fine to medium SAND, trace fine gravel, dense, dry	
7	SP		30	20	0.0		
8	SM					Orange-brown to brown, fine to coarse, silty SAND, some fine to coarse gravel, dense, dry	
9			28	20	0.0	Orange-brown to light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
10	SW					Trace cobbles	
11			28	20	0.0		
12						Fine gravel	
13	SP		25	20	0.0	Light brown, fine to medium SAND, trace fine gravel, medium dense, dry	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW					Orange-brown, fine to coarse SAND , some fine gravel, medium dense, dry	
14	SP					Orange-brown, fine to medium SAND , trace fine gravel, medium dense, dry	
15			20	18	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
16							
17			23	22	0.0		
18						Light brown to tan	
19			14	18	0.0		
20	SW					Light brown, trace fine gravel	
21			14	22	0.0		
22						Some fine to coarse gravel	
23			20	24	0.0		
24							
25			10	16	0.0		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			22	22	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	NA = Not available (Rad data not recorded)
28							
29			22	0	NA		
30							
31			20	24	0.0		
32	SP					Trace fine gravel	
33			20	22	0.0		
34							
35			10	20	0.0		
36							
37			16	24	0.0		
38						Light brown to orange-brown	
39			12	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[Symbol]				Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
41	SP	[Symbol]	21	18	0.0	Tan to light brown, fine to medium SAND , trace coarse sand fine gravel and silt, medium dense, moist	
42	SW	[Symbol]				Light brown to tan, fine to coarse SAND , trace fine gravel, dense, moist	
43		[Symbol]	32	18	0.3	Tan, fine to medium SAND , trace coarse sand, dense, moist	
44		[Symbol]				Light brown, coarse sand grades out, loose	
45	SP	[Symbol]	5	20	0.7		
46	ML	[Symbol]				Clayey silt seam Brown, fine sandy SILT , trace clay seams, loose, moist	
47	SP	[Symbol]				Light brown to tan, fine to medium SAND , medium dense, moist	
47	SM	[Symbol]	17	20	1.2	Brown, silty fine SAND , medium dense, moist	
48	CL	[Symbol]				Brown, silty CLAY , trace fine gravel, very stiff, moist	
49		[Symbol]	43	24	0.9	Light brown to brown, fine to medium SAND , trace silt and fine gravel, dense, moist	
50	SP	[Symbol]				Light brown, silt grades out	
51		[Symbol]	40	24	1.0		
52		[Symbol]					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SW	[Symbol]	19	24	1.0	Light brown to orange-brown, fine to coarse SAND , trace fine gravel, medium dense	
54	SP	[Symbol]				Light brown to orange-brown, fine to medium SAND , medium dense, moist	
55	SW	[Symbol]	18	20	0.7	Light brown to orange-brown, fine to coarse SAND , trace fine gravel, medium dense, moist Tan Tan, fine to medium SAND , medium dense, moist	
56							
57	SP	[Symbol]	22	22	1.1		
58							
59	SW	[Symbol]	20	18	0.8	Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
60						Tan, fine to medium SAND , medium dense, moist Trace coarse sand	
61			24	22	1.7		
62	SP	[Symbol]				Orange-brown, clayey sand from 61.5-61.6' Dense	
63			30	20	1.3		
64						Medium dense	
65			20	24	1.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: A21 - DL01

Date Drilled: 1/5/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	SW					Tan, fine to coarse SAND , medium dense, moist	
	SP					Tan, fine to medium SAND , medium dense, moist	
66	EOB						
67						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 66' bgs on 1/6/05 Groundwater not encountered Boring backfilled with clean soil on 1/6/05 Analytical samples from 1-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium 	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: B19 - DL01
Date Drilled: 1/4/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			21	12	0.0	Asphalt	
2						FILL, brown, fine to coarse, silty sand, trace fine gravel, moist	
3			10	16	0.0	Light brown, fine to coarse, silty sand, some fine to coarse gravel	
4						Tan to light tan, sandy clay	
5			37	22	0.0	Orange-brown to reddish brown, fine to medium SAND, some coarse sand and fine gravel, trace coarse gravel, dense	
6	SP					Some coarse gravel, very dense	
7			64	16	0.0		
8						Brown	
9	SW					Brown, fine to coarse SAND, trace coarse gravel, medium dense	
10	SP		24	20	0.0	Dark brown, fine to medium SAND, medium dense, moist Light brown to brown	
11			46	20	0.0	Some coarse sand and fine gravel 1" dark brown, fine layer at 10.5'	
12	SW					Red-brown, fine to coarse SAND, some gravel, dense, moist	
13			45	20	0.0	Light red-brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B19 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
14	SP					Orange-brown, fine to medium SAND , some coarse sand and gravel, dense, moist	NA = Not available (blow counts and PID data not recorded)	
15			33	24	0.0			
16	SW					Tan, fine to coarse SAND , trace fine to coarse gravel, moist		
17			NA	0	NA			
18								Medium dense
19			22	12	0.0			
20								Trace fine gravel
21			20	16	0.0			
22								Trace fine to coarse gravel
23			18	22	0.0			
24					Dark tan, very dense			
25								
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B19 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			32	17	0.0	Dark tan, fine to medium SAND , some coarse sand, trace gravel, dense, moist	
28	SP					Trace coarse sand and gravel	
29			26	20	0.0	Some coarse sand and gravel	
30	SW					Tan to dark tan, fine to coarse SAND , some fine gravel, medium dense, moist	
31	SP		27	19	0.0	Dark tan, fine to medium SAND , medium dense, moist	
32	SW					Tan to dark tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
33			30	16	0.0	Dark tan, fine to medium SAND , some coarse sand, trace fine gravel, dense, moist	
34						Trace coarse sand and fine gravel, medium dense	
35	SP		17	20	0.0		
36						Some coarse sand, dense	
37			32	24	0.0		
38						Medium dense	
39			27	18	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B19 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[stippled]				Dark brown, fine to coarse SAND , some gravel	
41			37	18	0.0	Tan to dark tan, fine to medium SAND , some coarse sand, trace gravel Trace coarse sand, dense	
42						1" dark brown layer at 41.75'	
43	SP	[stippled]	22	20	0.0	Tan with brown laminations to 43.5', trace fine gravel, coarse sand grades out	
44	sc	[stippled]				1" orange-tan, clayey sand at 43.5', trace medium sand, medium dense, moist	
45	sc	[stippled]	20	20	0.0	1" red-brown, clayey sand at 44.5'	
46						Tan, medium sand grades out, interbedded with reddish brown, clayey sand, medium dense, moist	
47	CL	[diagonal lines]	20	20	0.0	Trace medium sand Light brown, silty CLAY , very stiff, moist	
48	SP	[stippled]				3" reddish brown to reddish tan followed by tan, fine SAND , medium dense, moist	
49	CL	[diagonal lines]	43	20	0.0	Tan, fine sand interbedded with light brown, silty CLAY , moist Sand grades out, hard	
50	SW	[stippled]				Dark brown, reddish brown, and orange-tan interbedded, fine SAND , dense, moist Brown, fine to coarse SAND , some gravel, very dense, moist	
51	SP	[stippled]	61	18	0.0	Tan, fine SAND , very dense, moist	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B19 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			32	18	0.0	Tan, fine SAND , dense, moist	
54						Trace medium sand, medium dense	
55	SP		28	20	0.0		
56						Dense	
57			36	22	0.0		
58							
59		SMHHH	50	22	0.0	Reddish brown, silty fine SAND , very dense, moist Tan, fine SAND , trace medium sand, very dense, moist	
60						Dense	
61			42	16	0.0		
62	SP					Very dense	
63			66	22	0.0		
64							
65			65	10	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B19 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, trace medium sand, very dense, moist	
66	EOB						
67						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 66' bgs on 1/5/05 Groundwater not encountered Boring backfilled with clean soil on 1/6/05 Analytical samples from 1-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium 	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B21 - DL01

Date Drilled: 12/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
						Asphalt	
1			21	18	0.0	FILL, dark brown, fine silty sand, some fine gravel, dry	
2						Grading to light brown Black, sandy silt, some fine to coarse gravel, moist Dark brown to black with trace light brown	
3			24	24	0.0		
4						Light brown, fine to coarse sand, some fine to coarse gravel, moist Dark brown to black with trace light brown, sandy silt, some fine to coarse gravel, moist Light brown mottled with dark brown	
5			6	18	0.0		
6							
7			8	24	0.0		
8							
9			7	19	0.0	Concrete debris at 9'	
10							
11			19	18	0.0	Brown, fine to coarse, silty sand, trace fine to coarse gravel, moist Concrete debris at 11.5'	
12							
13			8	15	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B21 - DL01

Date Drilled: 12/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14						FILL , brown, fine to coarse, silty sand, trace fine to coarse gravel, moist 1.5-2" dark brown layer at 13.5'	
15			7	12	0.0	Light brown, fine to coarse SAND , trace fine to coarse gravel, loose, moist	
16						Light brown grading to tan, trace fine gravel, medium dense	
17			10	18	0.0		
18						Tan grading to light brown, trace fine to coarse gravel	
19			14	18	0.0	1" dark brown layer at 19'	
20	SW					Light brown, some silt at 21.25'	
21			13	20	0.0		
22						Tan, some fine gravel, trace coarse gravel, dry	
23			18	17	0.0	Increasing coarse sand content with depth	
24						Trace light brown	
25			22	23	0.0		
26	SP					Light brown, fine to medium SAND , some coarse sand, trace fine gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: B21 - DL01
Date Drilled: 12/14/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			NA	23	0.0	Tan grading to light brown, fine to coarse SAND , some fine gravel, dry	NA = Not available (blow counts not recorded)
28						Light brown, some silt to 28.5', trace coarse gravel, medium dense	
29	SW		22	24	0.0		
30							
31			25	24	0.0		
32	SP					Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist Trace brown	
33	SW		22	18	0.0		
34	SP					Brown, fine to coarse SAND , some fine gravel, medium dense, moist Light brown with trace brown, fine to medium SAND with coarse sand and fine gravel, medium dense, moist	
35	SW SP		17	24	0.0	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
36	SW					Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
37	SP		22	20	0.0	Light brown with brown laminations to 38', fine to medium SAND , trace coarse sand, medium dense, moist	
38	SW						
39	SP		NA	24	0.0	Dark to light brown, fine to coarse SAND , some fine gravel, moist Light brown with reddish laminations, fine to medium SAND , moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B21 - DL01

Date Drilled: 12/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Light brown with trace red, fine to coarse SAND , some fine gravel, moist	
41			NA	21	0.0	Trace orange Light brown, trace fine gravel	NA = Not available (blow counts not recorded)
42						Light brown with reddish laminations to 42.8', fine to medium SAND , moist	
43	SP		38	20	0.0	Some coarse sand, dense 1/2" reddish medium to coarse seams at 42.8'	
44						Tan, fine sand, trace coarse sand, moist, medium dense	
45			19	19	0.0		
46	ML					Reddish brown SILT , medium dense, moist	
47	SP					Tan, fine SAND , medium dense, moist	
48	ML SP SM ML SP		22	24	0.0	Reddish brown SILT , medium dense, moist	
49	ML SM		65	24	0.0	Tan, fine SAND , medium dense, moist Light brown, silty SAND , medium dense, moist Brown, clayey SILT , medium dense, moist	
50	SP					Tan and brown mottled, fine SAND , very dense, moist Brown SILT , very dense, moist	
51			115	20	0.0	Reddish brown, fine to coarse, silty SAND , very dense, moist Light orange-brown, fine SAND , some coarse sand, very dense, moist	
52						Very dense Tan, trace silt	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B21 - DL01

Date Drilled: 12/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SM		30	19	0.0	Orange-tan, silty SAND , dense, moist 1/2" silt seams at 52.75', 53', and 53.5'	
54						Tan, fine sand, some silt to 54', dense, moist Medium dense	
55	SP		20	22	0.0		
56	SM					Orange, silty SAND , dense, moist	
57			42	21	0.0	Light tan, fine SAND , dense, moist	
58	SM					2" silty sand at 57.5'	
59	ML		46	24	0.0	1/2" orange silt seam at 58.3'	
60						Very dense	
61	SP		58	24	0.0	1/2" brown silt seam at 60.4'	
62							
63			70	17	0.0		
64							
65			61	17	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOST, Hicksville, NY

Log of Boring: B21 - DL01

Date Drilled: 12/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP SM					Light tan, fine SAND , very dense, moist 1" orange, silty sand layer at 65.7'	
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/15/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/15/04 4. Analytical samples from 1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
0						Asphalt and gravel	
1			9	18	0.0	FILL , brown to dark brown, silty sand, some fine to coarse gravel, trace clay seams, dry	
2							
3			16	18	0.1	Orange-brown, fine to coarse sand, some fine gravel, moist	
4							
5			18	24	0.0	Brown to dark brown, fine to coarse, silty sand, some fine to coarse gravel, trace brick, dry Orange-brown, fine to coarse sand, some fine gravel, moist	
6	ML					Light grayish brown to orange-brown, clayey SILT , some fine to coarse gravel, very stiff, moist	
7			24	24	1.3	Brown to dark brown, fine to coarse SAND , some silt and fine to coarse gravel, medium dense, dry	
8						Orange-brown, fine gravel, silt grades out Light brown to orange-brown, fine to coarse gravel	
9			13	18	0.0		
10	SW						
11			13	24	0.0	Light brown, gravelly	
12							
13			18	24	0.0	Light brown to light tan, some gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: B22 - DL01
Date Drilled: 1/4/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW					Light tan, fine to coarse SAND , some fine to coarse gravel, dry	
	ML					Brown, fine sandy SILT , trace fine gravel, medium dense, moist	
15			11	20	0.0	Brown to light brown, fine to coarse SAND , some fine gravel, trace silt, medium dense, moist	
16						Light brown to tan	
17			11	24	0.1		
18						Light brown to orange-brown	
19			10	24	0.0		
20	SW					Light brown, trace fine to coarse gravel	
21			10	24	0.3		
22						Light brown to orange-brown, some gravel	
23			11	24	0.5		
24						Gravelly	
25			10	20	0.1	Some fine gravel, coarse gravel grades out	
26	SP					Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			15	24	0.5	Orange-brown to light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
28						Light brown, trace fine gravel, coarse gravel grades out, loose	
29			8	18	0.2		
30						Medium dense	
31			12	20	0.3		
32						Brown to light brown	
33	SW		10	22	0.5		
34						Light brown, loose	
35			7	24	0.6		
36						Dark brown to brown, trace fine to coarse gravel	
						Brown, light brown and orange-brown, some gravel, medium dense	
37			14	24	0.3		
38						Light brown, trace gravel	
39			12	24	0.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
41			24	24	1.0	Trace coarse sand	
42						Coarse sand grades out, trace silt seams	
43	SP		23	16	1.1		
44						Tan to light brown, gravel and silt seams grade out	
45			13	22	2.0		
46							
47	SM		16	20	1.9	Brown, fine to medium, silty SAND , some fine gravel, trace coarse sand, medium dense, moist	
48						Light brown to tan, fine to medium SAND , dense, moist	
49			35	22	1.6	Orange-brown to light brown, trace fine gravel	
50	SP					Light brown to orange-brown, trace clay seams	
51			39	24	1.4		
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			12	22	0.4	Light brown to tan, fine to medium SAND, medium dense, moist Orange-brown band at 52.7'	
54							
55			14	22	0.6		
56						Tan	
57			14	20	0.3	Orange-brown, trace silt	
58						Tan	
59	SP		47	24	0.8	Light brown to tan, dense	
60						Tan, medium dense	
61			28	22	0.6		
62						Dense	
63			40	20	0.9		
64						Orange-brown, trace silt, medium dense	
65			20	18	0.6		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL01

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND , medium dense, moist	
66	EOB						
67						<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to 66' bgs on 1/5/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/5/05 4. Analytical samples from 1-63': <ol style="list-style-type: none"> a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium 	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: B22 - DL02
Date Drilled: 12/15/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
0						Asphalt	
1			28	20	0.0	FILL , dark brown, silty sand, some fine to coarse gravel, moist	
2						Light brown	
3			14	14	0.0	Trace cobbles	
4							
5			6	20	0.0	Gray to tan, clayey SILT , trace fine sand, medium stiff, moist	
6	ML					Hard	
7	SP		50	22	0.0	Reddish brown to light brown, fine to medium SAND , some fine gravel, very dense, moist	
8						Brown, silty SAND , some fine gravel, medium dense, moist	
9	SM		16	20	0.0	Reddish brown, sandy SILT , trace fine gravel, medium dense, moist	
10	ML						
11			37	20	0.0	Light brown grading to dark brown, fine to coarse SAND , trace fine to coarse gravel, dense, moist	
12	SW						
13			48	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL02

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW					Dark brown, fine to coarse SAND , trace fine to coarse gravel, dense, moist	
15			62	20	0.0	Tan, fine to medium SAND , little fine gravel, very dense, moist	
16	SP						
17			23	20	0.0	Light brown, fine to coarse SAND and fine to coarse gravel, medium dense, moist	
18							
19			24	22	0.0		
20							
21	SW		27	22	0.0		
22							
23			20	16	0.0		
24						Tan, little fine gravel, dense	
25	SP		35	20	0.0	Tan, fine to medium SAND , trace fine gravel	
26	SW					Tan to light brown, fine to coarse SAND and fine to coarse gravel, dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL02

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			29	22	0.0	Tan to light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
28						Trace cobbles	
29			26	24	0.0		
30							
31			16	20	0.0	Light brown, little fine gravel	
32							
33	SW		19	20	0.0	Tan, trace fine gravel	
34						1" dark brown layer at 33.4' Little coarse gravel	
35			13	18	0.0	Light brown, some fine to coarse gravel	
36						Dark brown sand and fine gravel	
37			19	20	0.0	Tan to light brown mottled, some fine to coarse gravel	
38							
39			24	24	0.0	Tan, little fine gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL02

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Tan, fine to coarse SAND , little fine gravel, medium dense, moist	
41	SW		31	20	0.0		
42						Light brown, some fine gravel, dense	
43			32	22	0.0		
44	ML					Brown, sandy SILT , dense, moist	
45	SP					Tan, fine to medium SAND , trace fine gravel, dense, moist	
46	SM		28	20	0.0	Medium dense Alternating 2" layers of orange-brown, silty SAND and tan, fine to medium sand, medium dense, moist	
47	SP					Tan, fine to medium SAND , medium dense, moist	
48	ML		29	22	0.0	Brown, clayey SILT , some sand, medium dense, moist	
49			45	22	0.0	Light brown, fine to medium SAND , trace fine gravel, dense, moist	
50	SP					Tan	
51			40	22	0.0		
52	SM					Reddish brown, silty SAND , dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: B22 - DL02

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SP		37	20	1.2	Tan, fine to medium SAND , trace fine gravel, dense, moist 2" reddish brown, silty sand at 52.2'	
54						1/2" reddish brown, silty sand at 52.5'	
55			30	20	0.0	1" reddish brown, silty sand at 54.4'	
56							
57			56	22	0.0		
58							
59	SM		32	20	0.0	Reddish brown, silty SAND , dense, moist 2" tan, fine to medium sand at 59.5'	
60	SP					Tan, fine to medium SAND , very dense, moist	
61			79	22	0.0		
62							Dense
63			48	20	0.0		
64							
65	SM		48	22	0.0	Reddish brown, silty SAND , dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: B22 - DL02
Date Drilled: 12/15/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND , dense, moist	
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/16/04 4. Analytical samples from 1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C17 - DL01

Date Drilled: 2/3/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Above ground surface Surface elevation at 143', first sample at surface is 2' below reference	
2						Concrete	*Drill through top 9", blow count reported from bottom foot
3			24*	12	0.0	FILL, dark brown to black, silty sand with fine to coarse gravel, moist	
4							
5			69	19	0.0	Light brown to brown, fine to coarse sand, trace silt, some fine to coarse gravel, moist	
6							
7			68	14	0.0	2" red brown, gravelly sand layer at 7'	
8							
9			59	24	0.3	1" dark brown, silty sand layer at 8.3'	
10						Dark brown, sandy silt, some fine to coarse gravel, moist	
11	SW		26	14	0.0	Light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
12							
13			18	16	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C17 - DL01

Date Drilled: 2/3/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14						Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist Some fine to coarse gravel	
15			30	22	0.0	Light brown to brown, sand with fine to coarse gravel, trace cobbles, dense	
16						Little fine gravel, coarse gravel and cobbles grade out, medium dense	
17			16	16	0.0		
18							
19	SW		18	22	0.8		
20							
21			14	16	0.4		
22						With fine to coarse gravel	
23			12	15	0.0		
24							
25			22	22	0.3		
26						Gravelly sand, trace cobbles	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C17 - DL01

Date Drilled: 2/3/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		27	16	0.0	Light brown to brown, gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
	SP					Light brown, fine to medium SAND , medium dense, moist	
28	SW					Brown, fine to coarse SAND with gravel, medium dense, moist	
29			26	21	0.0	Brown to dark brown, fine to medium SAND , some gravel, medium dense, moist	
30							
31			16	20	0.0		
32	SP						
33			22	19	0.0		
34							
35			19	22	0.0		
36							
37	SW		20	12	0.0	Dark brown to black, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
38							
39			28	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C17 - DL01

Date Drilled: 2/3/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[stippled]				Dark brown to black, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
	SP	[stippled]				Brown to dark brown with black laminations, fine SAND , medium dense, moist	
41	SW	[stippled]	26	22	0.0	Tan to light brown, fine to coarse SAND with gravel, medium dense, moist	
42		[stippled]				Light brown to brown with dark brown laminations, fine to medium SAND , trace fine gravel, medium dense, moist	
43	SP	[stippled]	22	14	0.0		
44		[stippled]					
45		[stippled]	26	24	1.1		
46	ML	[horizontal lines]				Alternating layers of light brown, sandy SILT and tan, fine to medium sand, medium dense, moist	
47		[stippled]	24	14	0.0	Light brown to brown, fine to medium SAND , medium dense, moist	
48	SP	[stippled]					
49		[stippled]	20	22	0.0		
50	ML	[horizontal lines]				Brown, clayey SILT , very stiff, moist	
	SP	[stippled]				Light brown, fine to medium SAND , medium dense, moist	
51	CL	[diagonal lines]	20	22	0.0	Brown, silty CLAY , very stiff, moist	
52	SP	[stippled]				Light brown to brown, fine to medium SAND , trace fine gravel, medium dense, moist 3" dark brown, gravelly sand	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C17 - DL01

Date Drilled: 2/3/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SW		73	14	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, very dense, moist	
54						Tan, fine to medium SAND , very dense, moist	
55	SM		68	22	0.1	1" red brown, silty sand layer at 55.4'	
56						Medium dense	
57			29	18	0.0		
58						Dense	
59	SP		46	24	0.4		
60						Medium dense	
61			24	22	0.3		
62							
63			21	22	0.2		
64	SM					4" red brown, silty sand layer at 63.6'	
						Dense	
65	SM		44	24	0.0	2" red brown, silty sand layer at 64.5'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C17 - DL01
Date Drilled: 2/3/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND, dense, moist	
66	SM					1/16" red brown, silty sand layer at 65.7'	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

- NOTES:
- Boring completed to 66' below reference on 2/4/05
 - Groundwater not encountered
 - Boring backfilled with clean soil on 2/4/05
 - Analytical samples from 3-63':
 - On-Site radiological every foot
 - On-Site nickel every odd-numbered foot
 - SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL01

Date Drilled: 1/31/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			8*	6	0.0	Concrete	
2						FILL , dark brown, fine to medium sand, little fine gravel, trace silt, moist	
3			4	16	0.0	Trace coarse gravel Dark brown to black, silty sand, little fine gravel, moist	
4						Trace cobbles	
5			3	14	0.0		
6						Brown to dark brown, some fine to coarse gravel	
7			7	20	0.0		
8						With gravel	
9			25	19	0.0		
10	SP					Light brown to brown, fine to medium SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
11	SW		22	16	0.0	Light brown, fine to coarse SAND , medium dense, moist	
12	SP					Light brown to brown, fine to medium SAND , some fine to coarse gravel, trace cobbles, medium dense, moist Very dense	
13			55	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL01

Date Drilled: 1/31/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
14	SW					Brown, fine to coarse SAND with fine to coarse gravel, very dense, moist		
15			23	16	0.0	Light brown to brown, medium dense		
16							Light brown, some fine gravel, coarse gravel grades out, dense	
17	SP		32	24	0.0	Tan, fine to medium SAND , some fine to coarse gravel, dense, moist		
18						Medium dense		
19			20	18	0.0			
20	SW					Tan to light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist		
21			12	15	0.0			
22								
23			22	22	0.0			
24								
25			15	16	0.0			
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL01

Date Drilled: 1/31/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			53	22	0.0	Tan to light brown, fine to coarse SAND , some fine to coarse gravel, very dense, moist	
28						Light brown to brown Medium dense	
29			22	18	0.0		
30							
31	SW		20	14	0.0		
32						Brown, trace fine gravel, coarse gravel grades out Dark brown laminations from 31.4 - 31.8'	
33			28	24	0.0	Tan to light brown, sand with gravel	
34						Light brown to brown, trace fine gravel	
35			14	19	0.0		
36							
37			26	22	0.0	Brown to dark brown, sand with fine to coarse gravel, trace cobbles	
38							
39			16	14	0.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C18 - DL01
Date Drilled: 1/31/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Brown to dark brown, fine to coarse SAND with fine to coarse gravel, trace cobbles, medium dense, moist	
41			23	16	0.0	1" coarse black sand layer at 39.6' Light brown, little fine gravel, trace cobbles, coarse gravel grades out Dark brown laminations from 41 - 41.6'	
42						Red brown to dark brown layer at 41.6 - 41.8'	
43	SW		48	24	0.0	1" dark brown layer at 42.7', dense	
44						1/4" dark brown silt seam at 43.8' Dark brown laminations at 44.8 - 45.4', medium dense	
45			20	16	0.0		
46						Trace fine gravel, cobbles grade out	
47			23	20	0.0		
48	SM					Brown, silty SAND , medium dense, moist	
49	CL ML		6	22	0.0	Brown, silty CLAY , medium stiff, moist Brown, sandy SILT , loose, moist	
50	CL					Brown, silty CLAY , medium stiff, moist	
51	SM SW		44	20	0.0	Light brown to brown, silty SAND , dense, moist Dark brown to black Brown, fine to coarse SAND with fine to coarse gravel, dense, moist	
52	SP					Tan, fine to medium SAND , dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL01

Date Drilled: 1/31/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SP		100	18	0.1	Tan, fine to medium SAND , very dense, moist	
54	ML		21	22	0.0	Brown, sandy SILT , medium dense, moist	
55						Tan to light brown, fine to medium SAND , medium dense, moist	
56							
57			26	22	0.0		
58							
59	SP		17	20	0.0		
60							
61			21	16	0.0		
62						Dense	
63			41	22	0.5		
64							
65			30	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C18 - DL01
Date Drilled: 1/31/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan to light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 2/1/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 2/1/05 4. Analytical samples from 0-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
						Above ground surface Surface elevation at 144', first sample at surface is 1' below reference	
1						Concrete	
2						FILL , dark brown, silty sand, some fine to coarse gravel, moist	
3			38	15	0.0	Dark brown to black, sand with fine to coarse gravel, construction debris	
4							
5			89	22	0.4	Light brown to brown, fine to medium sand with fine to coarse gravel, moist	
6							
7			71	16	0.0		
8						Brown to dark brown, some fine gravel, coarse gravel grades out	
9			45	21	0.0	1" dark brown to black silty sand layer at 8.4' Dark brown, silty sand, some fine gravel, moist 2" light brown sand layer at 9.3'	
10							
11	SW		24	16	0.0	Tan to light brown, fine to coarse SAND with fine gravel, trace coarse, medium dense, moist	
12						Dense	
13			33	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14						Tan to light brown, fine to coarse SAND with fine gravel, trace coarse gravel and cobbles, dense	
						Trace cobbles	
15			34	18	0.0		
16						Medium dense	
17			20	15	0.0		
18	SW					With fine to coarse gravel, medium dense, cobbles grade out	
19			18	22	0.0		
20						Trace cobbles	
21			16	15	0.0		
22							
23			19	22	0.0		
24						3" light brown fine to medium sand layer at 23.3'	
25			16	16	0.0		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			26	17	0.0	Tan to light brown, gravelly SAND , trace cobbles, medium dense, moist	
28						Light brown, sand with fine to coarse gravel	
29	SW		28	24	0.0		
30							
31			18	14	0.0		
32						Light brown fine to medium SAND , trace fine gravel, medium dense, moist	
33						Some fine to coarse gravel	
34	SP		28	24	0.0		
35			16	20	0.0	Laminations of dark brown, fine sand at 34.8 - 35.5'	
36							
37			18	15	1.2		
38	SW					Brown to dark brown, fine to coarse SAND , little fine gravel, medium dense, moist	
						Dense	
39			30	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Brown to dark brown, fine to coarse SAND , little fine gravel, dense, moist 2" dark brown, fine to medium sand layer at 39'	
41			26	18	0.0	Light brown to brown, fine to medium SAND , trace fine gravel and cobbles, medium dense Dark brown laminations at 40.5 - 41.2'	
42						Dark brown laminations from 42 - 44'	
43	SP		22	24	0.0		
44						Tan to light brown, gravel and cobbles grade out	
45			16	20	1.0		
46						1" silty sand layer at 46.7'	
47			10	18	0.0	Loose	
48	ML					Light brown to brown, clayey SILT , loose, moist 3" light brown fine to medium sand layer at 47.4' and 47.9'	
49	SP					Brown, fine to medium SAND , trace silt, medium dense, moist	
50	ML		11	22	0.0	Brown, clayey SILT , stiff, moist 1" brown fine to medium sand layer at 49.6'	
51	CL					Brown, silty CLAY grading to clayey silt, very stiff, moist	
52	SW		26	20	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, trace silt, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			61	20	0.0	Tan, fine to medium SAND , trace fine gravel, very dense, moist	
54						Dense	
55			38	20	0.0		
56						1" red brown silty sand layer at 55.9'	
57	SP		26	20	0.0	Medium dense	
58						Dense	
59			30	NA	0.0		NA = Not available (recovery not recorded)
60						Medium dense	
61			17	20	0.0		
62						4" red brown silty sand layer at 61.2'	
63			36	20	0.0	Dense	
64						Very dense	
65			53	20	1.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C18 - DL02

Date Drilled: 2/1/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND , trace fine gravel, very dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' below reference on 2/2/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 2/3/05
4. Analytical samples from 3-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						BACKFILL Soil previously excavated to 4' bgs and backfilled	NA = Not available (PID data not recorded)
2							
3			5	12	NA		
4							
5	ML		6	6	0.0	No recovery	
6						Dark brown, sandy SILT , some fine to coarse gravel, loose, moist	
7			14	20	0.0	Orange-brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
8							
9	SW		16	18	0.0		
10							
11	SP		23	24	4.2	Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
12	SW					Brown, fine to coarse SAND , some fine to coarse gravel, very loose, moist	
13	ML		3	24	1.3	Silt seam at 12.6'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks		
14	SW		24	20	2.0	Brown, fine to coarse SAND , some fine to coarse gravel, very loose, moist Trace cobbles, medium dense	NA = Not available (PID data not recorded)		
15									
16									
17	23	24	0.4						
18					No recovery from 18-20' (assumed to be well graded sand as above and below)				
19			25	0	NA				
20	SW		18	18	0.0	Light brown, medium dense			
21									
22									
23								17	23
24									
25	11	18	1.1						
26									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			10	24	1.9	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
28							
29			10	21	1.0		
30							
31	SW		21	24	2.9		
32							
33			16	24	2.8		
34							
35			29	18	0.7	Light brown, fine to medium SAND , trace fine gravel, medium dense, moist Increasing gravel content from 38-39'	
36							
37	SP		14	24	0.3		
38							
39			15	22	1.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39.5	SP	[Stippled pattern]				Light brown, fine to medium SAND , some fine gravel, moist	
40.0	SW	[Dotted pattern]				Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
41.0		[Stippled pattern]	30	24	0.8	Brown, fine to medium SAND , some fine to coarse gravel, dense, moist Dark brown laminations from 41.1-42.4'	
43.0		[Stippled pattern]	17	24	0.6	Light brown, trace fine gravel, medium dense	
45.1	SP ML	[Stippled pattern]	14	22	1.5	Silt seam at 45.1'	
47.7	ML	[Stippled pattern]	13	22	1.6	Silt seam at 47.7' Brown	
49.0	CL	[Diagonal hatching]	5	24	0.4	Brown, sandy CLAY , medium stiff, moist	
50.0		[Stippled pattern]				Brown, sandy SILT , medium dense, moist	
51.0	ML	[Vertical lines]	14	24	0.8	Trace fine gravel	
52.0		[Stippled pattern]					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SM		34	24	1.7	Brown, silty SAND , trace fine gravel, dense, moist	
54	SP		34	24	1.7	Light brown, fine to medium SAND , trace fine gravel, dense, moist	
55	ML		16	24	1.8	Brown, SILT , medium dense, moist	
56						Tan, fine to medium SAND , medium dense, moist	
57			25	24	1.3		
58							
59			16	24	1.2		
60	SP						
61			16	24	2.0		
62							
63			17	19	1.8		
64							
65			18	24	1.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL03

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
66	SP					Tan, fine to medium SAND, medium dense, moist		
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 66' bgs on 12/2/04 Groundwater not encountered Boring backfilled with clean soil on 12/7/04 Analytical samples collected from 5-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site VOCs every even-numbered foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel 		
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C20 - DL01
Date Drilled: 11/23/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						BACKFILL Soil previously excavated to 4.5' bgs and backfilled	
2							
3							
4							
5			7	18	0.1	Orange-brown, fine to medium SAND , some coarse sand and fine gravel, loose	
6	SP					Medium dense	
7			12	19	0.0		
8							
9	SW		23	16	0.0	Orange-brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles to 10'	
10	SP					Orange-brown, fine to medium SAND , dense	
11	SW		44	22	0.0	Orange-tan to dark reddish brown, fine to coarse SAND , some fine gravel, dense	
12	SP					Orange-brown, fine to medium SAND , some coarse sand and fine to coarse gravel, dense	
13			37	18	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C20 - DL01
Date Drilled: 11/23/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
14	SP					Orange-brown, fine to medium SAND , some coarse sand and fine to coarse gravel, dense		
15			26	18	0.0	Medium dense		
16							Some fine gravel, trace coarse gravel, dense	
17	SW		32	20	0.0			
18								
19			22	19	0.0	Tan to light brown, fine to coarse SAND , some fine gravel, medium dense		
20	SW					Some fine to coarse gravel		
21			23	19	0.0			
22	SP					Decreasing coarse sand		
23			20	20	0.0	Light brown, fine to medium SAND , some coarse sand and fine to coarse gravel		
24	SW							
25			26	14	0.0	Orange-tan, fine to coarse SAND , some fine gravel, trace cobbles to 26'		
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL01

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SP		35	22	0.0	Light brown, fine to medium SAND , some coarse sand and fine gravel, dense	
28						Trace coarse gravel, medium dense	
29			24	19	0.6		
30						Trace fine gravel, coarse gravel grades out, decreasing coarse sand	
31			24	18	0.0		
32						Occasional cobbles	
33			28	20	0.0		
34							
35			18	22	0.0		
36						1/8" dark brown to black seam	
37	25	20	0.0		Some coarse sand and fine gravel		
38					3" brown, fine to coarse sand		
					3" black, medium to coarse sand, trace silt at 37.5'		
					Brown, fine sand seams to 40', some coarse gravel, dense		
					Trace coarse sand		
39			49	NA	0.0		NA = Not available (recovery data not recorded)

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL01

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Light brown, fine to medium SAND , some coarse sand and fine to coarse gravel, trace fine sand seams to 40', dense, moist	
41			43	18	0.5		
42							
43			58	22	0.9	Brown silty laminations from 42.5-42.75', very dense	
44	SP					Some medium sand, trace coarse, dense	
45			35	18	1.1		
46							
47			33	22	0.5	Fine to medium sand	
48						Some medium sand	
49	CL		46	24	0.9	Light brown, silty CLAY , hard	
50	SM					Orange-brown, silty SAND , very dense	
51			109	20	0.9	Black to dark brown, fine to medium SAND , some coarse sand and gravel, very dense	
52	SP					Light brown to tan, trace medium sand	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL01

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SP		84	16	1.4	Tan, fine SAND, some medium sand and fine to coarse gravel, very dense	
54							
55	CL		60	18	1.0	1/4" light reddish brown, sandy clay	
56						Light brown, fine to medium sand	
57			47	22	0.6	Dense	
58	SC					Light reddish brown, clayey SAND, dense	
59			31	20	0.8	Light brown, fine SAND, some fine to coarse gravel, dense	
60							
61	SP		41	23	0.5		
62						Medium dense	
63			22	22	0.4		
64							
65			28	18	0.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL01

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Light brown, fine SAND , some fine to coarse grave, medium dense	
66	EOB					NOTES: 1. Boring completed to 66' bgs on 11/29/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/6/04 4. Analytical samples collected from 4-63': a. On-Site radiological every foot b. On-Site VOCs every even-numbered foot c. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						BACKFILL Soil previously excavated to 4' bgs and backfilled	
2							
3							
4							
5	SM		7	18	0.0	Light brown grading to brown, silty SAND , some fine gravel from 4.5-5.5', loose	
6	SP					Light brown, fine to medium SAND , some coarse sand and gravel	
7	ML		20	20	0.0	Light gray, clayey SILT , trace gravel, very stiff	
8						Light brown, fine to medium SAND , some coarse sand and gravel, occasional cobbles, medium dense	
9			47	17	0.0	Dense	
10	SP					Trace coarse gravel	
11			45	18	0.0		
12						Very dense	
13			51	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP					Light brown, fine to medium SAND , some coarse sand and fine gravel, trace coarse gravel, occasional cobbles, very dense	
15			38	18	0.0	Dense	
16	SW					Light brown, fine to coarse SAND , some gravel	
17	SP		33	18	0.0	Tan, fine to medium SAND , some coarse sand and fine gravel, trace coarse gravel	
18						Tan, fine to coarse SAND , some fine gravel, medium dense	
19	SW		24	18	0.0		
20						Tan, fine to medium SAND , some coarse sand, trace gravel	
21			22	17	0.0		
22						Tan grading to light brown	
23	SP		21	20	0.0		
24						Light brown, occasional cobbles, very dense	
25			56	10	0.0		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SP		41	20	0.0	Light brown, fine to medium SAND , occasional cobbles, some coarse sand, trace gravel, dense	
28						Medium dense	
29			26	17	0.0		
30							
31			29	20	0.0		
32							
33			27	20	0.0	1/4" brown seam	
34							
35			25	18	0.0		
36	SW					Dark brown, fine to coarse SAND , some gravel	
						Light brown, some fine to coarse gravel, dense, moist	
37			33	18	0.9		
38							Trace fine gravel
					Medium dense		
39			29	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW		32	20	1.0	Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
41						Dense	
42	SP		29	22	3.0	Light brown, fine to medium SAND , trace fine gravel and clay seams to 44', medium dense, moist	
43							
44						Light brown to tan, gravel grades out	
45							
46	SM		28	22	2.5	Some fine gravel, dense	
47							
48						2" brown SILT Brown to light brown, silty fine SAND , trace fine gravel, dense, moist	
49	CL		41	24	0.7	Brown, silty CLAY , hard, dry	
50	SM					Brown, fine to medium, silty SAND , some fine gravel, dense, moist	
51	SW		58	22	0.5	Brown to light brown, fine to coarse SAND , some fine gravel, very dense, moist	
52	SP					Light brown to tan, fine to medium SAND , very dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			47	16	0.2	Light brown to tan, fine to medium SAND, dense, moist	
54						Light reddish brown	
55			36	19	0.2	Interbedded tan and reddish brown	
56						Tan	
57			38	18	0.5		
58	SP					Very dense	
59			57	20	0.1		
60						Dense	
61			45	20	0.3		
62						Medium dense, 1/2" reddish brown seam Light brown	
63			22	18	0.6		
64							
65			16	22	0.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL02

Date Drilled: 11/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND , medium dense, moist	
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/2/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/6/04 4. Analytical samples collected from 5-63': a. On-Site radiological every foot b. On-Site VOCs every even-numbered foot c. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL01

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
9						BACKFILL Soil previously excavated to 10' bgs and backfilled	
10						Backfill material, no sample collected	
11	SM		12	24	0.4	Brown, silty fine to medium SAND , some fine gravel, medium dense, moist	
12							
13			12	24	0.8	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
14							
15			11	18	0.3		
16	SW					Some fine gravel	
17			14	20	0.5		
18							
19			10	20	0.2		
20							
21			14	22	0.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C22 - DL01
Date Drilled: 12/8/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
22						Light brown, fine to coarse SAND, some fine gravel, medium dense, moist	
23			12	20	0.7		
24						Loose	
25			9	22	0.3		
26	SW					Medium dense	
27			14	24	0.8		
28						Light brown to tan, some fine to coarse gravel, loose	
29			9	24	0.5		
30						Medium dense	
31			10	20	0.2		
32						Light brown to brown, some fine to coarse gravel	
33			10	22	1.2		
34	SP					Light brown to brown, fine to medium SAND, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL01

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
35	SP		5	22	0.9	Light brown to brown, fine to medium SAND , trace fine gravel and coarse sand, loose, moist	
36							
37			10	20	0.2	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist Brown to dark brown, some fine gravel	
38	SW					Light brown to orange brown	
39			7	20	1.4	Light brown to tan, some fine to coarse gravel, loose	
40							
41	SP		18	24	1.3	Light brown to tan, fine to medium SAND , trace fine gravel and fine sand, medium dense, moist	
42	SW					Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
43			27	24	1.8	Light brown to tan, fine to medium SAND , trace clay seam, medium dense, moist	
44						Trace fine gravel	
45	SP		15	20	1.5		
46						Very dense	
47			115	24	1.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL01

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
48	SP					Greenish tan, fine to medium SAND , trace fine gravel, very dense, moist	
48	SM					Brown, silty fine SAND , some fine gravel, very dense, moist	
49			53	22	2.9	Light brown, fine to medium SAND , some fine gravel, trace coarse sand, very dense, moist Gravel and coarse sand grades out	
50						Dense	
51			39	24	3.1		
52						Light brown to tan, medium dense, moist	
53	SP		12	20	1.1		
54						Light brown, orange brown, and tan banded, trace orange brown clayey sand seams	
55			18	24	1.2		
56						Gray clay seam Light brown to tan, trace coarse sand and fine gravel Tan, coarse sand grades out, dense	
57			33	22	1.5		
58						0.3' orange brown band	
59			32	24	0.7		
60							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL01

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
61			36	22	1.1	Tan, fine to medium SAND , trace fine gravel, dense, moist 0.1' orange brown, clayey sand	
62						0.1' orange brown, clayey sand	
63	SP		16	24	1.1	Tan to light brown, gravel grades out, medium dense	
64						Tan	
65			25	22	1.1	0.1' orange brown band	
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/9/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/9/04 4. Analytical samples collected from 11-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL02

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			22	16	0.0	Asphalt and gravel	
2						FILL, dark brown silt, some fine to coarse gravel, dry	
3			9	12	0.0	Dark brown, silty sand, some fine to coarse gravel, dry	
4							
5	CL		7	24	0.0	Dark brown to brown, silty CLAY , some fine gravel, trace fine sand, medium stiff, moist	
6							
7			21	18	0.0	Brown, fine to medium SAND , some fine to coarse gravel, trace silt, medium dense, dry	
8							
9			12	21	0.0	Light brown, fine sand, silt grades out	
10	SP						
11			18	18	0.0		
12							
13			12	21	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL02

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP		18	21	0.0	Light brown, fine SAND, some fine to coarse gravel, medium dense, dry	
15							
16	SW		20	24	1.0	Light brown to brown, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
17							
18							
19							
20							
21	SW		10	18	0.3	Moist	
20							
21	SW		10	22	0.8		
22							
23	SP		15	21	0.3	Light brown, fine to medium SAND, some fine to coarse gravel, medium dense, moist	
24	SW		18	24	0.3	Light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
25							
26	SW						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL02

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SP		20	24	1.0	Light brown, fine to medium SAND, some fine to coarse gravel, medium dense, moist	
28							
29			11	24	0.5		
30							
31			15	24	0.4		
32							
33	SW		14	24	1.5	Dark brown laminations, trace fine gravel	
34							
35			13	21	0.7		
36						Light brown to brown with trace dark brown laminations, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
37							
38							
39	SP		11	NA	0.7	Brown to tan, fine to medium SAND, trace fine gravel, medium dense, moist	NA = Not available (recovery not recorded)

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL02

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Brown to tan, fine to medium SAND , trace fine gravel, medium dense, moist	
41			43	24	1.4	Light brown, dense	
42						Medium dense	
43	SP		14	21	0.6		
44							
45	ML		16	24	0.5	Brown, sandy SILT , medium dense, moist	
46	SM					Light brown, fine silty SAND , trace fine gravel, medium dense, moist	
47			34	24	0.7	Brown, fine to medium, some fine gravel, dense	
48						Light brown, fine to medium SAND , dense, moist	
49			30	21	0.4	Light brown to tan, dense	
50	SP					Medium dense	
51			20	21	0.0		
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C22 - DL02

Date Drilled: 12/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			9	22	0.5	Light brown to tan, fine to medium SAND , loose, moist	
54						Medium dense	
55			13	22	0.0		
56							
57			26	18	0.3		
58	SP						
59			26	18	0.3		
60						Tan, dense	
61			31	18	0.4		
62							
63			20	24	0.1		
64						1" orange-brown layer at 63.5', medium dense	
	SM					Orange-brown, silty SAND , medium dense, moist	
65	SP		19	24	1.2	Tan, fine to medium SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: C22 - DL02
Date Drilled: 12/16/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Chris Ortolano



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
66	SP					Tan, fine to medium SAND , medium dense, moist		
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/17/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/17/04 4. Analytical samples from 1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium		
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Above ground surface Surface elevation at 143', first sample at surface is 2' below reference	
2						Concrete	* Blow counts from bottom foot of spoon, top foot was drilled through concrete
3			10*	8	0.0	FILL , dark brown, silty fine sand, some fine to coarse gravel, dry	
4							
5			10	22	0.0	Brown, fine to medium sand, some fine gravel, trace cobbles, dry	
6						Some fine to coarse gravel, trace silty sand	
7			48	23	0.0		
8						Brown, silty fine sand, some fine to coarse gravel, dry	
9			52	22	0.0		
10						Light brown, fine to medium SAND , some fine to coarse gravel, dense, dry	
11	SP		32	12	0.0		
12						Brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
13	SW		23	18	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW					Brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
15			33	22	0.0	Brown, fine to medium SAND , some fine to coarse gravel, dense, moist	
16	SP					Medium dense	
17			25	12	0.0		
18						Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
19			25	20	0.0		
20							
21	SW		14	16	0.0		
22							
23			17	12	0.0		
24							
25			30	22	1.7		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		22	18	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
28							
29			29	22	1.6	Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
30							
31			15	18	0.0		
32							
33	SP		24	18	0.0		
34						Brown to tan, trace fine gravel, coarse gravel grades out	
35			26	22	0.5		
36							
37			28	18	0.6		
38							
39	SW		27	22	0.8	Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist Dark brown from 39.5 - 39.9'	
41			28	19	0.0	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
42						Dense	
43			35	21	0.7		
44	SP					Brown, gravel grades out, medium dense	
45			26	22	0.0		
46							
47			23	16	0.0		
48	SM					Dark brown, silty fine SAND , medium dense, moist	
49			18	24	0.0	Dark brown, clayey SILT with trace fine sand, very stiff, moist	
50	ML						
51			22	24	0.0		
52	SP					Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			48	15	0.0	Tan, fine SAND, dense, moist	
54	SP					Medium dense	
55			29	16	0.0		
56						1" silty sand lens at 55.5' 2" silty sand lens at 55.7'	
57			24	16	0.0		
58	SP						
59			21	20	0.6		
60							
61			14	16	0.0		
62						Loose	
63			9	18	0.0		
64							
65			10	24	0.0	2" silty sand lens at 64.9'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D16 - DL01

Date Drilled: 2/8/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels and Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, loose, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' below reference on 2/10/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 2/10/05
4. Analytical samples from 3-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Asphalt and concrete	
2						FILL, dark brown, fine to medium sand, some fine to coarse gravel, moist	
3			31	12	0.0		
4						Brown, fine to medium SAND, some fine to coarse gravel, dense, moist	
5			31	16	0.0		
6	SP						
7			41	16	0.0		
8							
9			36	14	0.9		
10						Medium dense	
11			26	15	0.0		
12						Light brown, fine to coarse SAND, some fine gravel, medium dense, moist	
13	SW		30	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW					Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
15			19	16	0.0	Brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
16							
17			21	15	0.3		
18							
19	SP		20	16	1.1		
20			*13	9	0.8	Light brown, some gravel	*1' spoon driven from 20-21'
21							
22			14	14	1.1		
23			*22	12	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	*1' spoon driven from 23-24'
24	SW					Trace gravel	
25			12	16	0.5		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
27	SP		20	16	0.0	Brown, fine to medium SAND, trace fine to coarse gravel, medium dense, moist		
28								
29			25	22	0.8			
30			*11	12	2.0		*1' spoon driven from 30-31'	
31								
32			21	16	1.0			
33			*24	12	1.2		*1' spoon driven from 33-34'	
34								Fine gravel
35			16	22	0.3			
36								Trace cobbles
37	22	16	1.2					
38								
39	26	22	0.5					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Brown, fine to medium SAND , trace fine gravel and cobbles, medium dense, moist	
40-41			*16	10	0.8	Light brown	*1' spoon driven from 40-41'
41						Dark brown laminations from 41-41.2'	
42			24	17	0.5		
43						Gravel grades out, dense	*1' spoon driven from 43-44'
44	SP		*34	12	0.5		
45			19	18	1.1	Silty sand seams from 44.9-45.1', medium dense	
46							
47	SM		19	18	0.8	1" silty sand layer at 47.2' 1" silty sand layer at 47.5'	
48	SM					Brown, silty fine SAND , medium dense, moist	
49	SM		15	18	0.0		
50						Brown, sandy CLAY , medium stiff, moist	*1' spoon driven from 50-51'
51	CL		*5	12	0.3		
52	SM		33	19	0.4	Brown, silty fine to medium SAND , some fine to coarse gravel, dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SM					Brown, silty fine to medium SAND, some fine to coarse gravel, dense, moist	*1' spoon driven from 53-54'
54			*57	12	0.3	Brown, fine to medium SAND, some fine to coarse gravel, very dense, moist	
55			43	22	1.1	Light brown, fine sand, gravel grades out, dense	
56							
57			30	16	0.3		
58							
59	SP		37	23	1.4		
60						Tan, medium dense	
61			25	16	1.0		
62							
63			26	20	1.0	1" silty sand layer at 62.75'	
64						Dense	
65			34	16	1.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D17 - DL01

Date Drilled: 1/21/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 1/26/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/26/05 4. Analytical samples from +1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
						Above ground surface Surface elevation at 144', first sample at surface is 1' below reference	
1						Concrete	
2						FILL , brown, fine to coarse sand, some fine to coarse gravel, little silt	
3			19	18	0.0	Dark brown, silty sand, little fine to coarse gravel, trace cobbles	
4							
5			45	17	0.2	Tan-orange, fine to coarse SAND , trace fine to coarse gravel and silt, dense	
6	SW						
7			37	12	0.5		
8	SP SW					Tan-orange, fine SAND , dense	
9	SP SM		42	22	0.2	Tan-orange, fine to coarse SAND , little fine to coarse gravel, dense Tan-orange to brown, fine SAND , trace cobbles, moist Brown, silty SAND , some cobbles, moist	
10						Tan-orange, fine to coarse SAND , little fine to coarse gravel, moist Tan, some fine gravel, little coarse gravel, medium dense	
11	SW		18	15	0.0		
12						Little fine to coarse gravel, dense	
13			40	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
14	SW					Tan, fine to coarse SAND , little fine to coarse gravel, dense, moist		
15			20	16	0.0	Tan-orange, some fine gravel, medium dense		
16							Little fine to coarse gravel	
17			17	14	0.0			
18	SP					Tan, medium to coarse SAND , medium dense, moist		
19			23	18	0.0	Fine to medium sand		
20	GW					Tan, fine to coarse SAND and fine to coarse GRAVEL		
21			12	12	0.0	Some fine gravel, little coarse gravel		
22							And fine gravel, little coarse gravel, moist	
23			14	24	0.0			
24							Coarse gravel grades out	
25			14	12	0.0			
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			29	16	0.0	Tan to light brown, fine to coarse SAND , little fine to coarse gravel, medium dense, moist	
28						Some fine gravel, little coarse gravel, dense	
29	SW		32	20	0.0		
30							
31			17	19	0.0	Tan sand and fine to coarse gravel, medium dense	
32	SP					Tan with brown laminations to 31.8', fine grading to fine to medium SAND , trace fine gravel from 31.8-32', moist	
33	SW					Light brown, fine to coarse SAND , little fine gravel	
34	SP		23	22	0.0	Tan with brown laminations, fine to medium SAND	
35	SW					Brown, fine to coarse SAND , little fine gravel, trace silt	
36	SP		22	17	0.0	Tan, fine to medium SAND , little coarse sand	
37						Brown with dark brown laminations, fine sand, trace silt, moist	
38						Light brown, fine to medium sand	
39	SW		20	17	0.0	Tan, fine to coarse SAND , trace fine gravel, moist	
			18	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville; NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[Dotted pattern]				Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
41			19	17	0.0	Light brown, fine SAND , trace silt and fine to coarse gravel, medium dense, moist Brown, medium to coarse sand, little fine sand, gravel grades out 1" tan, fine layer at 40.4'	
42						Tan, fine to medium sand, trace coarse sand and fine gravel	
43						Brown laminations to 43.5', medium dense	
44	SP ML	[Dotted pattern]	23	19	0.0	Gravel grades out 1" brown silt at 44' Trace silt seams to 46'	
45			14	16	0.0		
46							
47			15	17	0.0		
48	ML SP	[Horizontal lines]				Dark brown, silty sand seam followed by brown, clayey SILT grading to silty CLAY , very stiff	
49	ML	[Horizontal lines]	16	17	0.0	Tan, fine SAND , medium dense Brown, sandy SILT , medium dense	
50	CL	[Diagonal lines]				Brown, silty CLAY , trace silt seams, stiff, moist	
51	SP	[Dotted pattern]	14	22	0.0	Tan with orange laminations, fine SAND , trace fine gravel, medium dense	
52						Brown, little fine to coarse gravel, moist at 51.7-52'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SM SW		64	21	0.0	Brown, silty SAND , some fine to coarse gravel, trace clay, very dense, moist 2" brown, silty clay layer at 52'	
54						Tan, fine to coarse SAND and fine gravel, very dense, moist Dense	
55			36	19	0.0		
56						Light tan with trace brown mottling, medium dense	
57			23	18	0.0		
58							
59	SP		22	21	0.0		
60						Light tan to white, trace silt	
61			20	18	0.0	Fine to medium sand, brown mottling grades out Fine sand	
62						Trace brown mottling and brown laminations, dense	
63			38	22	0.0		
64						Medium dense	
65			24	18	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL01

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Light tan to white with trace brown mottling and brown laminations, fine SAND , medium dense, moist	
66	EOB						
67						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 66' below reference on 1/12/05 Groundwater not encountered Boring backfilled with clean soil on 1/12/05 Analytical samples from 2-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium 	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D18 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
						Concrete	
1		[Cross-hatched pattern]	9	8	0.0	FILL , light brown silt, trace fine to coarse gravel, dry	
2						Dark brown, trace fine sand, some gravel	
3			9	14	0.0		
4							
5			3	12	0.0		
6							
7		[Dotted pattern]	11	20	0.0	Brown, fine SAND , trace fine to coarse gravel, medium dense, moist	
8						Fine to medium sand, some fine gravel	
9			20	15	0.0		
10	SP					Light brown to brown, fine to coarse gravel, dense	
11			33	18	0.0		
12							
13			34	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP		24	18	0.3	Light brown to brown, fine to medium SAND , some fine to coarse gravel, dense, moist	
15						Medium dense	
16							
17			26	21	0.0		
18	SW		12	18	0.1	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
19							
20						Fine to coarse gravel	
21			15	15	0.0		
22	SP		24	21	0.0	Light brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
23							
24						Tan to light brown, fine gravel	
25			29	14	0.0		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: D18 - DL02
Date Drilled: 1/6/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Chris Ortolano



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			38	21	0.5	Light brown with trace dark brown laminations, fine SAND, trace fine gravel, dense, moist	
28							
29			22	18	0.3	Fine to medium sand, some fine to coarse gravel, laminations grade out, medium dense	
30							
31			20	18	0.5		
32	SP					Fine sand , trace fine gravel	
33			22	18	0.0		
34						Silty sand seams from 33.75-33.9'	
35			20	15	0.0		
36						Fine to medium sand, some gravel	
37			20	21	0.0		
38							
39			23	12	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: D18 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Light brown, fine to medium SAND , some fine gravel, medium dense, moist	
41			26	16	0.9	Fine sand, trace gravel	
42						Dense	
43	SP		32	21	1.2		
44						Tan, gravel grades out, medium dense	
45			15	15	0.2		
46						Tan to light brown, trace fine gravel	
47			18	21	0.4	Sandy silt seams from 47.1-47.4'	
48						Brown, sandy, silty CLAY , medium stiff, moist	
49	CL		8	16	0.0	Sand grades out	
50						Hard	
51	SP		30	22	0.2	Light brown, fine to medium SAND , some fine to coarse gravel, trace silt, dense, moist	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			70	20	0.3	Tan, fine SAND , very dense, moist	
54						Dense	
55			33	20	0.0		
56						Medium dense	
57			26	21	0.5		
58	SM					2" silty sand layer at 57.6'	
59	SP		24	18	0.0	Tan with brown mottled	
60							
61			27	18	0.0		
62						Dense	
63			31	24	0.0		
64						Medium dense	
65			20	17	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL02

Date Drilled: 1/6/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan with trace brown mottled, fine SAND , medium dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 1/10/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/10/05 4. Analytical samples from 1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
0						Asphalt and concrete	
1			16	8	0.0	FILL, dark brown, silty fine to medium sand, some fine to coarse gravel, dry	
2							
3			4	16	0.0		
4							
5			3	16	0.0		
6						Dark brown, clayey sand, trace fine gravel, moist	
7			6	12	0.0	Dark brown, silty fine to medium sand, some fine to coarse gravel, dry	
8							
9	SP		20	15	0.5	Light brown, fine to medium SAND, trace fine to coarse gravel, medium dense, moist	
10							
11			28	16	0.0	Light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
12	SW					Dense	
13			34	16	0.6		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
14	SW					Light brown, fine to coarse SAND , some fine to coarse gravel, dense, moist		
15			20	15	0.0	Medium dense		
16	SP					Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist		
17			26	21	0.4			
18	SW					Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist		
19			14	16	0.0			
20								
21			15	15	0.0			
22			20	22	0.5			
23								
24								
25			25	16	0.5			
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			39	20	1.2	Brown, fine to medium SAND , some fine to coarse gravel, dense, moist	
28						Medium dense	
29	SP		22	16	0.7		
30							
31			18	16	0.4		
32	SW					Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
33			29	16	1.1	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
34							
35	SP		16	16	0.5		
36							
37			22	23	0.7		
38						Dark brown laminations from 37.8-38'	
39	SW		21	15	0.0	Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
41			28	15	0.4	Brown with dark brown mottling to 42', fine SAND , trace fine gravel, medium dense, moist	
42	SP					Fine to medium sand, gravel grades out, dense	
43			38	20	0.8		
44	SM					1" silty sand layer at 43.75' Brown with dark brown laminations to 46', fine sand, medium dense	
45			19	18	0.7		
46	SM					1" silty sand layer at 45.9' Fine to medium sand	
47			19	16	0.0		
48	SM SM					2" silty sand layers at 47.6' and 47.8'	
49	ML		7	21	0.3	Brown, sandy SILT , loose, moist clayey silt, medium stiff	
50							
51	SM		58	20	0.4	Brown, fine to medium, silty SAND , some fine to coarse gravel, very dense, moist	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			59	19	0.0	Tan, fine to medium SAND, very dense, moist	
54						Dense	
55			31	16	0.4		
56						Medium dense	
57			25	19	0.5		
58	SP						
59			15	18	0.6		
60	SM					1" silty sand layer at 59.5' Trace fine gravel	
61			16	16	0.4		
62						Fine sand, gravel grades out	
63			13	19	1.0		
64							
65			14	18	0.6		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D18 - DL03

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, medium dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' below reference on 1/28/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 1/28/05
4. Analytical samples from 1-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						BACKFILL Soil previously excavated to 4' bgs	
2							
3							
4							
5			5	-	0.0	FILL , brown to dark brown, fine to coarse sand, some fine gravel, moist	
6							
7			10	22	0.0	Tan to brown, fine to medium SAND , trace gravel and silt, loose, moist Medium dense Reddish brown to brown, medium to coarse sand with fine to coarse gravel Light brown to brown, fine to medium sand, some fine to coarse gravel, trace cobbles, medium dense Dense	
8							
9			22	16	0.0		
10	SP						
11			23	18	0.0		
12							
13			34	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP					Light brown to brown, fine to medium SAND, some fine to coarse gravel, trace cobbles, dense	
15			39	14	0.0	Tan to light brown, fine to coarse SAND, little gravel, dense, moist Some fine to coarse gravel	
16							
17			31	20	0.0		
18						Medium dense	
19			27	18	0.0		
20	SW					Trace cobbles	
21			22	18	0.0		
22							
23			23	14	0.0		
24						Dense	
25			37	16	0.0	Brown to dark brown, some fine gravel, trace coarse gravel	
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		45	16	0.0	Brown to dark brown, fine to coarse SAND , some fine gravel, trace coarse gravel, dense, moist	
28						Little gravel	
29			27	18	0.0	Medium dense	
30						Trace cobbles	
31	SP		25	20	0.0	Tan to light brown, fine to medium SAND , medium dense, moist	
32						Some fine gravel	
33			27	20	0.0	Tan to light brown, trace gravel	
34							
35	SW		22	20	0.0	Brown to dark brown, some gravel	
36							
37			21	20	0.0		
38	SW					Dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
39			37	22	0.0	1" black gravel layer at 37.5' Trace cobbles, dense	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Dark brown, fine to coarse SAND, some fine gravel, trace cobbles, dense, moist	
41			29	16	0.0	Light brown to brown, little gravel, medium dense	
42						Dark brown laminations from 41.3-41.6'	
43			40	20	0.0	Dark brown to brown laminations from 42-44', dense	
44	SW						
45			32	20	0.0	Dark brown to brown laminations from 44.8-45'	
46						Brown, trace gravel, cobbles grade out	
47			30	20	0.0	Brown to dark brown, gravel grades out	
48						Light brown, trace fine gravel	
49	ML		20	22	0.0	Brown, clayey SILT, medium dense, moist	
50	SM					Reddish brown, silty SAND, moist	
51	ML					Brown, clayey SILT, medium dense, moist	
52	SM		68	20	0.0	Very dense	
						Brown, silty SAND, some fine to coarse gravel, very dense, moist	
						Reddish brown layer from 51.4-51.5'	
						Dark brown to black layer from 51.5-51.8'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SW		26	20	0.0	Light brown, fine to coarse SAND , trace gravel, medium dense, moist 1" orange-brown, silty sand layer at 53'	
54							
55	SP		29	18	0.0	Tan, fine to medium SAND , medium dense, moist	
56	SM					Reddish brown, silty SAND , medium dense, moist	
57	SP		18	20	0.0	Tan, fine to medium SAND , medium dense, moist 1" reddish brown, silty sand layer at 56.4'; brown laminations from 56.6-57'	
58							
59	SM					Reddish brown, silty SAND , medium dense, moist	
60						Tan, fine to medium SAND , medium dense, moist	
61							
62	SP		26	22	0.0	Dense	
63							
64							
65			45	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL06

Date Drilled: 1/10/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfells



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND, dense, moist	
66	EOB						
67						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 66' below reference on 1/11/05 Groundwater not encountered Boring backfilled with clean soil on 1/11/05 Analytical samples from 6-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium 	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: D20 - DL01

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14						BACKFILL Soil previously excavated to 15.5' bgs and backfilled	
15			3	20	0.3		
16						Brown to light brown, fine to coarse SAND , some fine to coarse gravel, very loose, moist Light brown to tan, some fine to coarse gravel, occasional cobbles, loose	
17			8	18	0.6		
18							
19			7	10	0.8		
20	SW						
21			8	18	0.0	Medium dense	
22							
23			10	24	0.8		
24							
25			14	24	0.7		
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL01

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			13	22	0.4	Brown to light brown, fine to coarse SAND, some fine gravel, medium dense, moist	
28							
29			9	22	0.2	Light brown, some fine to coarse gravel, loose	
30							
31			15	24	0.4	Medium dense	
32							
33	SW		13	20	0.7	With fine gravel	
34							
35			9	22	0.6	Loose	
36							
37			13	24	0.7	Medium dense	
38							
39			12	24	0.8	Brown to dark brown, trace fine gravel, occasional cobbles to 38' Light brown to brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL01

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SP					Brown to light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
41	SW		17	22	1.0	Brown to dark brown, fine to medium SAND , trace coarse, medium dense, moist Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
43	SM		22	20	2.2	Interbedded brown SILT and light brown, fine SAND , medium dense, dry	
44	SW					Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
45			9	20	1.7	Light brown to orange-brown, fine to medium SAND , trace coarse and fine gravel, loose, moist	
46	SP					Medium dense	
47			22	24	3.4		
48						Wet	
49	SM		20	24	1.0	Brown, silty CLAY , very stiff, dry Brown to light brown, fine, silty SAND , medium dense, moist	
50	CL					Brown, silty CLAY , very stiff, moist	
51	SM					Brown to orange-brown to dark brown, fine to medium, silty SAND , trace fine gravel, dense, moist	
51	SP		30	24	2.0	Light brown, fine to medium SAND , dense, moist	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL01

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			28	24	2.1	Light brown to tan, fine to medium SAND , medium dense, moist Tan	
54							
55			15	20	2.4		
56							
57	SP		23	24	3.5		
58							
59			21	20	1.4		
60						2" orange-brown clayey sand layer	
61			25	24	3.2		
62							
63			33	24	2.2		
64	SC						
65			18	24	1.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL01

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine to medium SAND, medium dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 11/11/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/12/04 4. Analytical samples collected from 15-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL02

Date Drilled: 11/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
9						BACKFILL Soil previously excavated to 12' bgs and backfilled	
10							
11			8	18	0.0		
12						Light brown, fine to medium SAND , some coarse sand and fine gravel, trace coarse gravel, medium dense	
13			11	18	0.0		
14							
15			15	0	0.0		
16							Some coarse gravel, trace cobbles to 18', dense
17	SP		35	4	0.0		
18						Medium dense	
19			27	20	0.0		
20						With fine gravel	
21			26	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL02

Date Drilled: 11/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
22	SP		10	8	0.0	Light brown, fine to medium SAND , some fine gravel, medium dense	
23						Occasional cobbles	
24	SW		102	19	0.0	Light brown, fine to coarse SAND , some fine gravel, very dense	
25						3" fine to medium layer at 25.5'	
26	SP		45	22	0.0	Light brown, fine to medium SAND , trace coarse sand and fine gravel, dense	
27							
28	SW		45	20	0.0	Light brown, fine to coarse SAND , trace fine to coarse gravel	
29						3" fine to medium layer at 29'	
30	SP		49	23	0.0	Light brown to tan, fine to medium SAND , trace coarse sand and fine gravel	
31							
32	SP		30	18	0.0		
33							
34							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: D20 - DL02

Date Drilled: 11/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
35			62	23	0.0	Light brown to tan, fine to medium SAND , some coarse sand, trace fine gravel, very dense	
36						1/4" reddish brown seam Dense	
37			33	24	0.0		
38						Some fine to coarse gravel Brown	
39			44	22	0.5		
40	SP					Dark brown Tan, fine sand, trace coarse sand, gravel grades out, dense	
41			38	24	0.0		
42						Coarse gravel at 42'	
43			45	22	0.8		
44							
45			24	24	1.3	1/2" brown, fine to medium seam, medium dense	
46						Dense	
47			47	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL02

Date Drilled: 11/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	SP					Tan, fine SAND , trace coarse sand, dense	
48	CL					Tan, silty CLAY , hard	
	SM					Tan, silty, fine SAND , very dense	
49	CL		127	24	0.6	Tan, silty CLAY , hard	
50						1/4" reddish brown, fine sand, very dense 1/4" black, silty, fine to coarse sand Tan to light brown, fine to medium SAND , trace silt and coarse sand to 50.5'	
51	SP		109	24	0.6		
52							
53	sc		54	22	0.0	3" clayey sand	
54	SC					Reddish tan, clayey, fine SAND , very dense to dense	
55	SP		36	16	0.0	Tan grading to light tan, fine SAND , dense	
56						Medium dense	
57			28	22	0.0		
58						Dense	
59			36	24	0.0		
60							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL02

Date Drilled: 11/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
61			62	NA	0.0	Tan grading to light tan, fine SAND , very dense	
62							
63	SP		53	NA	0.0		
64						Dense	
65			37	NA	0.0		
66	EOB					NOTES: 1. Boring completed to 66' bgs on 11/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/22/04 4. Analytical samples collected from 12-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D21 - DL01

Date Drilled: 12/3/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
13						BACKFILL Soil previously excavated to 16.4' bgs and backfilled	
14							
15						Backfill material, no sample collected	
16							
17			10	12	0.0	Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
18	SP						
19			10	21	0.4	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
20							
21			15	24	0.5		
22							
23	SW		10	20	0.3		
24							
25			26	22	2.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: D21 - DL01

Date Drilled: 12/3/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
26	SP					Light brown, fine to medium SAND , trace fine gravel, medium dense, moist		
27			18	21	2.1			
28								
29			8	21	0.9	Dark brown, loose		
30							Brown, some fine to coarse gravel, medium dense	
31	SW		19	22	0.3			
32								
33			15	21	1.2			
34							Brown to dark brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
35			22	21	0.4			
36								
37								
38								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D21 - DL01

Date Drilled: 12/3/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39			13	20	0.5	Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
40							
41	SP		30	24	1.2		
42							
43			11	22	2.7		
44							
45	SM		18	24	3.2	Light brown with greenish tint, silty SAND	
46						Light brown to tan, fine to medium SAND , trace fine gravel, medium dense, moist	
47	SP		27	24	4.5		
48						Brown, silty fine to medium SAND , some fine to coarse gravel, very dense, moist	
49	SM		100	24	1.5		
50							
51			55	24	0.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D21 - DL01

Date Drilled: 12/3/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
52	SM					Brown, silty fine to medium SAND, some fine to coarse gravel, very dense, moist	
53			17	21	0.4	Light brown to tan, fine to medium SAND, medium dense, moist	
54							
55			23	24	1.3		
56							
57	SP		24	22	1.1		
58							
59			15	24	2.2		
60						Tan	
61			30	24	4.0		
62						Trace fine gravel	
63			19	24	2.1	Orange-brown band	
64						Orange-brown band	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D21 - DL01

Date Drilled: 12/3/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
65	SP		17	24	2.6	Tan, fine to medium SAND , trace fine gravel, medium dense, moist Orange-brown band	
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/6/04 4. Analytical samples collected from 17-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: D22 - DL02
Date Drilled: 12/10/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
11			6	20	0.0	BACKFILL Soil previously excavated to 11.2' bgs and backfilled	
12						Light brown, fine to coarse SAND , some fine to coarse gravel, loose, moist Dark brown, fine to medium layer from 11.4-11.5' Medium dense	
13			21	18	0.0		
14							
15			17	22	0.0		
16							
17	SP		24	NA	0.0	Tan to light brown, trace cobbles	NA = Not available (recovery data not available)
18							
19			26	NA	0.0		
20							
21			19	16	0.0		
22						Cobbles grade out	
23			20	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: D22 - DL02
Date Drilled: 12/10/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
24	SW					Tan to light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
25			24	18	0.0	Tan, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
26							
27			24	20	0.0		
28							
29			18	22	0.0		
30	SP						
31			18	18	0.0	Trace fine to coarse gravel Brown, trace fine gravel	
32							
33			14	16	0.0	Tan to light brown, little fine to coarse gravel	
34							
35			16	20	0.0		
36	SW					Light brown to brown, fine to coarse SAND , some fine gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: D22 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
37			19	22	0.0	Light brown to brown, fine to coarse SAND , some fine gravel, medium dense, moist	
38						Brown to dark brown, some fine to coarse gravel	
39			14	22	0.0	Tan	
40	SW						
41			24	20	0.0		
42							
43			22	22	0.0		
44						1" light brown layer at 43.4' Medium dense	
45	SM		22	22	0.0	Brown, silty SAND , medium dense, moist Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
46							
47	SP		26	20	0.0	Brown, fine to coarse gravel, trace silt	
48							
49			38	22	0.0	Tan, gravel and silt grade out, dense	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D22 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
50						Tan, fine to medium SAND , dense, moist	
51	SP		55	20	0.0	Very dense	
52						Medium dense	
53			21	20	0.0		
54	SM					Tan to light brown with some orange, silty SAND , medium dense, moist	
55			41	22	0.0	Tan, fine to medium SAND , dense, moist 1" reddish brown, silty sand at 54.6', dense	
56	SM					1" reddish brown, silty sand at 55.6'	
57			39	20	0.0		
58	SP						
59			31	22	1.0		
60							
61	SM		32	22	0.0	2" reddish brown, silty sand at 60.6'	
62	SM					2" reddish brown, silty sand at 61.5'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: D22 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
63	SP		39	22	0.0	Tan, fine to medium SAND , dense, moist	NA = Not available (recovery data not available)
64	SM					1" reddish brown, silty sand at 63.9', very dense	
65			67	NA	0.0		
66	SM EOB					1" reddish brown, silty sand at 65.9'	
67						NOTES: 1. Boring completed to 66' bgs on 12/14/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/14/04 4. Analytical samples collected from 17-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: D23 - DL01

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
6						BACKFILL Soil previously excavated to 6.3' bgs and backfilled	
7			25	24	0.1	Orange-brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
8	SW						
9			18	20	0.5		
10	ML					Brown SILT , some fine to coarse sand and fine gravel, medium dense, moist	
11			22	22	0.0	Brown to light brown, fine to coarse SAND , some fine to coarse gravel, trace silt lenses and cobbles, medium dense, moist	
12						Light brown to orange-brown, silt grades out	
13			19	18	0.2		
14	SW					Cobbles grade out	
15			16	22	0.6		
16						Light brown	
17			12	18	0.1		
18							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D23 - DL01

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
19			20	12	0.0	Light brown to orange-brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
20						Light brown to tan, cobbles grade out	
21			11	16	0.0		
22						Loose	
23			9	24	0.0		
24	SW					Medium dense	
25			16	22	0.5		
26							
27			18	24	0.1		
28						Light brown	
29			15	24	0.3		
30							
30	SW					Light brown to brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist	
31			12	20	1.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D23 - DL01

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
32	SW	[Symbol]				Light brown to brown, fine to medium SAND, trace coarse sand and fine gravel, medium dense, moist	
33			16	18	0.7	Light brown, fine to coarse SAND, trace fine gravel, medium dense, moist	
34						Light brown to brown, some fine gravel	
35			15	24	0.5	Light brown, some fine to coarse gravel	
36	SW	[Symbol]					
37			14	24	0.9	Light brown to dark brown to 37.8'	
38						Light brown to orange-brown	
39			33	0	NA		NA = Not available (PID data not recorded)
40							
41			17	24	0.4	Light brown to brown, fine to medium SAND, trace fine gravel, medium dense, moist	
42	SP	[Symbol]					
43			18	20	0.9		
44							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D23 - DL01

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoult



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
45	SP		40	24	1.9	Light brown to brown, fine to medium SAND, trace fine gravel, moist, dense	
	SM					Brown, silty fine SAND, dense, moist	
46						Brown, fine to medium SAND, some silt and fine gravel, dense, moist	
						Brown to light brown, silt and gravel grade out	
						Light brown to tan, trace coarse sand and fine gravel	
47			36	22	3.1		
48						Coarse sand and gravel grade out, medium dense	
49	SP		18	20	1.0		
50						Tan	
51			18	20	1.3		
52						Light brown, trace cobbles to 53', dense	
						Tan, cobbles grade out to 53.2'	
						Orange-brown to 53.5'	
53			36	22	3.2		
54	SW					Orange-brown, fine to coarse SAND, trace fine gravel, dense, moist	
						Some fine to coarse gravel	
55			34	24	2.0	Light brown to tan, fine to medium SAND, dense, moist	
56	SP					Tan, medium dense	
57			20	20	1.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: D23 - DL01

Date Drilled: 12/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
58						Tan, fine to medium SAND , medium dense, moist	
59			23	18	0.9		
60	SP					Dense	
61			36	22	1.8		
62							
63			38	18	1.2		
64	SW					Orange-brown to tan, fine to coarse SAND , trace fine gravel, dense, moist Medium dense	
65			17	22	2.0		
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/16/04 4. Analytical samples collected from 7-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL01

Date Drilled: 1/18/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Asphalt and concrete	
2						FILL, dark brown, silty sand, some fine gravel, moist	
3			24	16	0.0		
4							
5			23	16	0.3		
6							
7	SM		40	16	0.8	Brown, fine silty SAND, some fine to coarse gravel, dense, moist	
8							
9			36	16	0.0	Light brown, fine to medium SAND, some fine to coarse gravel, trace silt, dense, moist	
10						Trace gravel and cobbles, silt grades out	
11	SP		45	14	0.0		
12						Some gravel, cobbles grade out, medium dense	
13			30	16	0.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E17 - DL01
Date Drilled: 1/18/05
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Chris Ortolano



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP					Light brown, fine to medium SAND, some fine to coarse gravel, medium dense, moist	
15			21	14	0.4	Brown, fine to coarse SAND, trace fine to coarse gravel, medium dense, moist	
16							
17			22	14	0.8		
18						Light brown, some gravel	
19			23	20	0.7		
20	SW						
21			*18	12	0.4		
22			*14	12	0.5		
23							
24			*26	12	0.4		
25			21	16	1.0	Brown, trace fine gravel	
26	SP					Brown, fine to medium SAND, trace fine to coarse gravel, moist	*18" spoons driven from 20-21.5' and from 21.5-23'. 1' spoon driven from 23-24'

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL01

Date Drilled: 1/18/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		25	13	0.8	Brown, fine to coarse SAND , trace fine to coarse gravel, medium dense, moist	
28							
29			22	22	1.0		
30							
31	SP		15	12	1.5	Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
32							
33			22	24	0.6		
34							
35	SP		17	16	0.9		
36							
37	SW		16	16	0.8		
38							
39	SW		25	19	2.1	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL01

Date Drilled: 1/18/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW	[Symbol]				Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
41		[Symbol]	22	15	1.1	Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
42		[Symbol]					
43		[Symbol]	28	18	0.4		
44		[Symbol]					
45		[Symbol]	20	20	1.5	Gravel grades out	
46		[Symbol]				Brown	
47		[Symbol]	14	16	1.0		
48	ML	[Symbol]				Brown, clayey SILT , trace fine sand, stiff, moist	
49	SM	[Symbol]	22	17	2.3	Brown, silty fine SAND , medium dense, moist	
50		[Symbol]					
51	ML	[Symbol]	7	22	0.0	Brown, clayey SILT , trace fine sand, medium stiff, moist	
52	SP	[Symbol]				Brown, fine SAND , trace silt, loose, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL01

Date Drilled: 1/18/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			58	21	1.0	Brown to tan, silty fine to medium SAND, some fine to coarse gravel, trace cobbles, very dense, moist	
54						Light brown to tan, fine sand, gravel and cobbles grade out, dense	
55			40	16	1.1		
56						Medium dense	
57			26	14	1.1		
58	SP						
59	SM		27	23	1.0	1" silty sand layer at 59.4'	
60						Tan, medium dense	
61	SM		22	19	0.9	1" silty sand layer at 60.7'	
62							
63			19	21	0.7		
64							
65			22	16	0.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL01

Date Drilled: 1/18/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, medium dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' below reference on 1/20/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 1/21/05
4. Analytical samples from 2-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						Above ground surface Surface elevation at 143', first sample at surface is 2' below reference	
2						Concrete	*Drill through top 9", blow count reported from bottom foot
3			30*	15	0.0	FILL , dark brown grading to brown, silty, fine to coarse sand with silty seams and fine to coarse gravel, dry	
4							
5			14	22	0.5		
6	SW					Light orange brown, fine to coarse SAND and fine gravel, medium dense, dry Some gravel, trace red, dense	
7	SP		38	19	0.1	Light orange brown, fine SAND , some coarse sand, trace fine gravel, dense, dry	
8							
9	GW		33	19	0.0	Light brown, fine to coarse SAND and fine GRAVEL , trace coarse gravel, dense, dry 2 - 3" gravelly silt layer at 9'	
10	SP					Light brown, fine to medium SAND , some coarse sand, trace fine to coarse gravel, dense, dry Fine gravel, medium dense, moist	
11	GW		17	21	0.0	Light brown, fine to coarse SAND and fine to coarse GRAVEL , medium dense, moist	
12							
13	SP		22	24	0.0	Light brown orange, fine SAND , some medium and coarse sand and silt, trace fine gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SW		18	17	0.0	Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
15						Brown grading to light brown	
16						Trace fine to coarse gravel	
17			11	18	0.0		
18	SP		14	17	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
19							
20	SW		6	16	0.0	Light brown, fine to coarse SAND , trace fine gravel, loose, moist	
21						Gravelly sand, dry	
22							
23			9	24	0.0		
24	SP		13	16	0.0	Tan, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
25							
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		14	24	0.0	Light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
	SP					Light brown with trace dark brown, fine SAND, medium dense, moist	
28						Light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
						Trace fine gravel	
29	SW		13	24	0.0		
30						Occasional fine gravel, loose	
31			9	24	0.0	Light brown, fine to medium SAND, some coarse sand, occasional fine gravel, loose, moist	
32						Medium dense	
33	SP		13	19	0.0	3" fine sand layer	
34						Gravel and coarse sand grade out	
35		16	18	0.0	3" fine to coarse sand layer		
	SM				2" brown silty sand layer		
36					Light brown, fine to coarse SAND, occasional fine gravel, medium dense, moist		
37							
	SW	12	22	0.0			
38							
39		16	24	0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SW					Light brown, fine to coarse SAND , occasional fine gravel, medium dense, moist	
41			16	19	0.0	Light brown, fine SAND , medium dense, moist Fine to medium sand, some coarse sand, occasional fine gravel 1/2" dark brown seam at 41' 1/2" dark brown seam at 41.2'	
42						1/2" black coarse sand seam at 41.1' 4" fine sand layer	
43	SP		20	24	0.0	1/2" brown seam at 42.5'	
44						Fine sand with dark brown laminations	
45			18	24	0.0		
46						Fine to medium sand	
47	ML		16	24	1.0	Light brown, clayey SILT , very stiff, moist Light tan, fine to medium SAND , medium dense, moist	
48	SP						
49	ML		10	24	0.8	Brown sandy SILT , fine sand	
50						Brown clayey silt, sand grades out, moist 1" tan fine sand layer at 49.8'	
51	CL		10	24	0.0	Brown, silty CLAY , stiff, moist	
52	SP					Tan, fine SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	GW		55	24	1.2	Light brown, fine to coarse SAND and fine GRAVEL, some coarse gravel, very dense, moist	NA = Not available (no recovery data recorded)
54	SP					Light tan, fine SAND, very dense, moist Medium dense	
55	SM		25	24	0.0	1" orange silty fine sand, dense, layer at 55.3'	
56							
57			21	24	0.0		
58	SP					Trace brown from 58 - 60'	
59			14	NA	0.0		
60							
61	SM		14	24	1.3	2" orange silty fine sand, dense, layer at 60.5' Fine to medium sand with coarse sand	
62							
63	SM		16	24	0.0	2" orange silty fine sand, dense, layer at 62.5' White, fine sand	
64	SP					Light tan to white	
65			11	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E17 - DL02

Date Drilled: 1/28/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen and Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Light tan to white, fine SAND , medium dense, moist	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:

1. Boring completed to 66' below reference on 1/31/05
2. Groundwater not encountered
3. Boring backfilled with clean soil on 1/31/05
4. Analytical samples from 2-63':
 - a. On-Site radiological every foot
 - b. On-Site nickel every odd-numbered foot
5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
0						Concrete	
1						FILL, brown, silty fine to coarse sand, trace fine to coarse gravel, moist	
2							
3			10	18	0.0		
4							
5			36	16	0.0	Orange-brown, fine to coarse SAND, some fine to coarse gravel, trace silt, dense, moist	
6						Grading to light brown, silt grades out	
7			37	14	0.3		
8						Trace cobbles to 10'	
9	SW		45	16	0.0		
10						Light brown to tan and gravel, medium dense	
11			22	14	0.0		
12							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
13			46	20	0.0	Light brown to tan, fine to coarse SAND and fine to coarse gravel, dense, moist 1" brown layer at 12.75' Orange-brown	
14						Orange-brown to light brown, trace fine gravel, medium dense	
15			19	16	0.0		
16						Some fine to coarse gravel	
17			19	14	0.0		
18	SW						
19			24	20	0.1		
20						Light brown	
21			12	16	0.0		
22							
23			19	20	0.3		
24						Fine gravel	
25			29	16	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
26						Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
27			29	14	0.0	Fine to coarse gravel	
28							
29			26	22	0.0		
30						Trace gravel	
31			20	14	0.0		
32	SW					Brown to light brown, some gravel	
33			29	20	0.4		
34							
35			23	16	0.0		
36						1" dark brown, fine sand layer at 35.75' Trace coarse gravel and cobbles, fine gravel grades out	
37			16	16	0.1		
38							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39			27	22	0.4	Brown to light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
40						Trace coarse gravel	
41			24	18	0.5	1" dark brown, fine sand layer at 41.1' Light brown with trace brown mottling, medium dense	
42	SW					Dense	
43			31	20	0.4		
44						Brown to light brown, gravel grades out, medium dense	
45			20	18	0.2		
46						Brown, fine to medium SAND, trace fine gravel, medium dense, moist	
47	SP		14	18	0.1		
48	CL					Dark brown, silty CLAY, stiff, moist	
49	ML		23	18	0.0	Brown, sandy SILT, fine sand, medium dense, moist	
50	CL					Brown, silty CLAY, very stiff, moist	
50	ML					Orange-brown to light brown, sandy SILT, fine sand, moist	
51	CL		7	22	0.0	Brown, silty CLAY, very stiff, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	CL					Brown, silty CLAY , very stiff, moist	
52	SW					Brown to orange-brown, fine to coarse SAND , loose, moist	
	CL					Light brown, silty CLAY , hard, moist	
53	ML		61	24	0.0	Brown to light brown, sandy SILT , fine to coarse sand, trace coarse gravel, very dense, moist 1" dark brown layer at 52.8'	
	SW					Brown to light brown, fine to coarse SAND and fine to coarse gravel, very dense, moist	
54						Light brown, fine SAND , dense, moist	
55			39	14	0.0		
56	SP						
57			33	14	0.0		
58							
	ML					Orange-brown to light brown, sandy SILT , fine sand, moist	
59			31	20	0.2	Tan, fine SAND , dense, moist	
60						Medium dense	
61			23	18	0.5		
	SP						
62						Dense	
63			37	22	0.2		
64							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL02

Date Drilled: 1/12/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
65	SP		31	16	0.1	Tan with brown mottling, fine SAND, dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 1/13/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/14/05 4. Analytical samples from 3-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1			6	12	0.0	Concrete	
2						FILL, brown, fine to coarse sand, some silt, little fine to coarse gravel	
3			4	14	0.0	Brown, silty fine to coarse sand, little fine to coarse gravel	
4						1" tan, fine to coarse sand at 3.4'	
5			44	15	0.0	Concrete debris	
6							
7			35	20	0.0	Tan-orange, fine to medium SAND, trace fine to coarse gravel, dense, moist	
8	SP					Tan, fine sand, gravel grades out, medium dense	
9			23	16	0.0	2" fine to coarse layer, some fine gravel at 8.8' Fine to medium sand, trace fine to coarse gravel	
10						Tan, fine to coarse SAND, some fine to coarse gravel, moist	
11	SW		22	16	0.0	Tan, fine to medium SAND, little fine gravel, moist	
12	GP					Dark brown to black, fine GRAVEL, some medium to coarse sand	
13	SP		30	24	0.0	Tan-orange, fine to medium SAND, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP					Tan-orange, fine to medium grading to medium to coarse by 13.2', SAND , little fine gravel, medium dense, moist	
15			21	16	0.0	Tan, fine to medium sand, little fine to coarse gravel 1" brown-orange, fine sand with trace silt layer at 15'	
16						Tan, fine to coarse SAND , little fine to coarse gravel, moist	
17	SW		27	17	0.0		
18							
19	GP		15	19	0.0	Fine GRAVEL and coarse sand, little medium sand Tan, fine to coarse SAND , little fine gravel	
20							
21	GW		12	19	0.0	Tan, fine to coarse SAND and fine GRAVEL , some coarse gravel, medium dense, moist	
22						Trace fine to coarse gravel	
23	SP		15	24	0.0	Little coarse gravel Tan, fine to medium SAND	
24	GP					Fine GRAVEL , some fine to coarse sand	
24	SP					Tan, fine to medium SAND , some fine gravel	
25	SW		33	16	0.0	Tan, fine to coarse SAND , some fine to coarse gravel, dense, moist	
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27	SW		42	24	0.0	Tan, fine to coarse SAND , some fine to coarse gravel, dense, moist	
28	SP					2" dark brown followed by tan, fine to medium SAND , some silt in dark brown layer, dense	
29	SW		21	19	1.5	Brown, little fine to coarse gravel, medium dense, moist Trace silt, gravel grades out	
30	SP					Tan, fine to coarse SAND , some fine to coarse gravel, moist Light brown, fine to medium SAND , little fine gravel	
31	SW		18	17	1.9	1" tan, fine to coarse SAND , trace fine to coarse gravel, moist Light brown with brown bands, Tan, little gravel	
32							
33	SP		26	22	2.0	Tan, fine to medium SAND , trace fine to coarse gravel, moist	
34							
35	SW		16	20	1.1	Tan, fine to coarse SAND and fine gravel, moist	
36						Tan, fine SAND , trace medium sand and fine to coarse gravel, moist Tan, little gravel	
37	SP		21	20	1.5	Light tan, trace gravel	
38	SW					Tan, fine to coarse SAND , trace coarse gravel	
39	GW		21	18	0.8	Black to brown, fine to coarse GRAVEL , some fine to coarse sand, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SP	[stippled]				Tan with brown laminations, fine to medium SAND , some coarse sand, medium dense, moist	
41	SW	[stippled]				Tan, fine to coarse SAND , moist	
42	SP	[stippled]	20	16	0.0	Brown, fine SAND Tan, fine to medium sand, little coarse sand	
43	SW	[stippled]	24	24	0.0	Brown from 42-42.2' Light tan, coarse sand grades out	
44	SW	[stippled]				Light tan, fine to coarse SAND and fine gravel, little coarse gravel	
45	SP	[stippled]	15	17	0.8	Tan, fine SAND	
47	SP	[stippled]	23	24	0.0		
48	ML	[horizontal lines]				Tan SILT , medium dense	
49	SP	[stippled]	12	17	0.0	Seam of dark brown to black, silty sand followed by tan, fine SAND , moist 1" clayey sand layer at 49', medium dense	
50	CL	[diagonal lines]				Tan, silty CLAY , stiff	
51	SP	[stippled]	18	21	0.0	Tan with orange and black laminations to 51.6', fine to medium SAND , trace silt, medium dense, moist	
52	SP	[stippled]				Some coarse sand, little coarse gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	GW		54	21	0.0	Fine to coarse GRAVEL , some fine to coarse sand, very dense Tan, fine SAND , very dense, moist	
54						Dense	
55			39	21	0.0		
56							
57			32	20	0.0		
58						2" orange, trace silt layer at 57.4' Medium dense	
59	SP		25	16	0.0		
60							
61			29	20	0.0	Brown seam at 60.9'	
62						Intermittent brown mottling, dense	
63			43	21	0.0	Brown seam at 63.1'	
64						Medium dense	
65			26	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E18 - DL03

Date Drilled: 1/4/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	SP					Tan, fine SAND, medium dense	
66	EOB						
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

NOTES:
 1. Boring completed to 66' bgs on 1/5/05
 2. Groundwater not encountered
 3. Boring backfilled with clean soil on 1/6/05
 4. Analytical samples from 1-63':
 a. On-Site radiological every foot
 b. On-Site nickel every odd-numbered foot
 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL01

Date Drilled: 11/9/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
6						BACKFILL Soil previously excavated to 10' bgs and backfilled	NA = Not available (PID data not recorded)
7							
8							
9			7	24	NA		
10							
11			28	24	1.7	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
12						Light brown to orange-brown	
13			27	22	1.3		
14	SW					Light brown to brown	
15			19	22	1.2		
16						Light brown to tan	
17			24	22	0.9		
18							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL01

Date Drilled: 11/9/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
19	SW		14	24	1.2	Light brown to tan, fine to coarse SAND, some fine to coarse gravel, medium dense, moist		
20								
21			15	24	0.6	Dark brown and gray clay seam		
22							Light brown	
23			25	24	1.0			
24							Light brown to brown, dense	
25			41	24	0.7			
26							Light brown, trace fine gravel	
27			32	22	1.5			
28							Light brown to brown, some fine to coarse gravel, trace cobbles, medium dense	
29	22	18	0.3					
30					Light brown, cobbles grade out			
31	26	24	1.1					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL01

Date Drilled: 11/9/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
32	SP SW					Light brown to yellow-brown, fine to medium SAND , medium dense, moist	
33	SP		15	24	1.2	Light brown to tan, fine to coarse SAND , some fine gravel, medium dense, moist	
34						Light brown to brown, fine to medium SAND , trace coarse sand to fine gravel, medium dense, moist	
35			15	24	1.9		
36						Light brown to brown, fine to coarse SAND , some fine gravel, medium dense, moist	
37	SW		22	20	1.4		
38						Brown to dark brown layer from 37.4-38'	
39	SP SW SP		13	22	2.1	Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
40						Brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
41	SW					Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
42	SP		32	24	2.4	2" fine to coarse layer at 39.4'	
43						Brown to light brown, fine to coarse SAND , some fine gravel, dense, moist	
44	SW					Brown to light brown, fine to medium SAND , trace coarse sand to fine gravel, dense, moist	
45			35	22	4.1	Light brown to orange-brown, fine to coarse SAND , trace fine gravel, dense, moist	
46	SP					1" silty fine sand at 43.2'	
47						Light brown, fine to medium SAND , trace fine gravel, dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL01

Date Drilled: 11/9/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
45	SP		19	22	4.0	Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist	
46			Orange-brown to red from 45.4-46' Gravel grades out from 46-47'				
47			20	24	3.0	Moist to wet	
48			Loose from 48-48.5'				
49	CL		8	24	1.2	Brown silty CLAY , trace fine gravel and fine sand seams, medium stiff, moist, loose	
50	SW		28	18	0.3	Brown to dark brown, fine to coarse SAND , some fine to coarse gravel, trace clay layers, medium dense, wet to moist	
51						Light brown, fine to medium SAND , medium dense, moist	
52	SP		29	22	1.3	Orange-brown, clayey sand seam at 55', dense	
53							
54							
55							39
56							
57			13	20	3.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL01

Date Drilled: 11/9/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
58		SP				Tan, fine to medium SAND , medium dense, moist	
59			8	24	2.0	Light brown to tan, loose	
60						Medium dense	
61			12	24	2.8		
62							
63			17	22	1.8	Alternating brown sand and clay layers from 62.6-62.8'	
64						Dense	
65			32	24	2.2		
66	EOB					NOTES: 1. Boring completed to 66' bgs on 11/10/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/10/04 4. Analytical samples collected from 10-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL02

Date Drilled: 11/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
1						BACKFILL Soil previously excavated to 4.5' bgs and backfilled	
2							
3							
4							
5			44	24	0.0	Orange-brown, fine to medium SAND , some coarse sand and fine gravel, dense	
6							
7	SP		68	20	0.5	Trace coarse sand and fine gravel, very dense	
8						Dense	
9			49	16	0.0	Orange-tan, some coarse sand and fine gravel, occasional cobbles	
10							
11	SW		42	20	0.2	Orange-brown, fine to coarse SAND , some gravel	
12	SP					Orange-brown, fine to medium SAND , trace coarse sand Brown, some coarse sand and fine gravel	
13			30	22	0.5	Orange-tan, trace gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL02

Date Drilled: 11/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
14	SP	[stippled pattern]				Orange-tan, fine to medium SAND , some coarse sand, trace gravel, dense	
15	SW	[stippled pattern]	30	20	0.6	Tan, fine to coarse SAND , some fine gravel, trace coarse gravel, medium dense	
16	SP	[stippled pattern]				Orange-tan to orange-brown, fine to medium SAND 3" gray layer at 16.5'	
17			29	23	0.3	Tan, fine to coarse SAND , some fine gravel, trace coarse gravel, medium dense	
18							
19	SW	[stippled pattern]	19	22	0.4	2" fine sand layer	
20	SP	[stippled pattern]				Orange-tan, fine to medium SAND , some coarse sand and fine gravel	
21			26	18	0.4	Tan, fine to coarse SAND , some fine gravel	
22							
23	SW	[stippled pattern]	22	20	0.3		
24							
25	SP	[stippled pattern]	43	20	0.6	Light brown, fine to medium SAND , trace coarse sand and fine gravel, dense	
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL02

Date Drilled: 11/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			35	22	0.8	Light brown, fine to medium SAND , trace coarse sand and fine gravel, dense 1/4" reddish brown seam at 26.5'	
28						1/4" reddish brown seam at 27.5', some coarse sand	
29			34	20	0.2		
30						Trace coarse sand	
31	SP		39	23	0.9	Tan, some coarse sand	
32						Tan to light brown, trace coarse sand, medium dense	
33			28	22	0.5		
34							
35			26	20	0.8		
36						Light brown	
37	SW		42	22	0.3	Light brown, fine to coarse SAND , trace fine gravel, dense	
38	SP					Brown, fine to medium SAND , trace coarse sand Light brown	
39			43	20	1.6		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E19 - DL02
Date Drilled: 11/22/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40	SP		56	20	1.1	1/4" dark brown, fine to medium SAND , trace coarse sand, dense 3" tan Light brown Very dense	
41							
42	SW		24	20	5.5	Dark reddish brown, fine to coarse SAND , medium dense Tan, fine SAND , some medium sand, trace coarse sand	
43							
44	SP		30	21	1.8	Coarse sand grades out	
45							
46	CL		27	18	0.3	Tan to light brown silty CLAY , very stiff	
47							
48	SP					Light brown, fine SAND , very dense	
49							
49	CL		133	24	0.0	Light brown silty CLAY , hard	
50							
50	SW					Brown, fine SAND , trace clay, very dense Brown, fine to coarse SAND , some gravel, very dense	
51							
51	SP		114	22	1.6	Tan, fine SAND	
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL02

Date Drilled: 11/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53	SP		100	18	0.0	Tan, fine SAND , very dense	
54						Reddish tan, some silt to 55'	
55			63	20	0.0	Tan, trace medium to coarse sand to 56'	
56						Dense	
57			49	22	0.6		
58						Very dense	
59			65	20	0.7		
60						1/8" reddish brown seam at 59.75' 1/4" brown seam at 60.25', dense	
61	SP		42	18	0.8		
62							
63		45	NA	0.9		NA = Not available (recovery data not available)	
64							
65		48	NA	0.4			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: E19 - DL02

Date Drilled: 11/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
66	EOB					Tan, fine SAND, dense	
67						NOTES: 1. Boring completed to 66' bgs on 11/23/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/7/04 4. Analytical samples collected from 5-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19			15	18	0.0	13.8	BACKFILL Soil previously excavated to 19' bgs and backfilled	
20	SP						Brown, fine to medium SAND , some fine gravel, occasional clay seams, medium dense, moist	
21			22	16	0.0	12.4	Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
22							Light brown	
23			28	18	0.0	11.9		
24							Trace fine gravel and cobbles to 25', very dense	
25			72	10	0.0	11.6	Tan, some fine gravel	
26	SW						Medium dense	
27			25	19	0.0	11.7		
28							Some fine to coarse gravel	
29			29	21	0.0	12.0		
30								
31			19	18	0.0	11.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
32	SW						Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
33	SP		29	22	0.5	11.6	Tan, fine to medium SAND , trace fine gravel, medium dense, dry	
34							Tan, fine to coarse SAND , trace fine gravel, medium dense, dry	
35			13	18	0.0	11.1	Light brown to tan, trace fine to coarse gravel	
36							Some fine to coarse gravel	
37			27	18	0.0	11.8		
38							Brown, trace fine to coarse gravel, moist Some fine gravel, coarse gravel grades out	
39	SW		28	22	0.6	11.9	Trace fine to coarse gravel, moist	
40							Light brown, dry	
41			27	22	0.7	11.3		
42							Some fine to coarse gravel	
43			22	24	1.3	NA		NA = Not available (Rad data not recorded)
44								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
45	SW	[Dotted pattern]	32	*9	0.8	NA	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	NA = Not available (Rad data not recorded)
46	SP	[Dotted pattern]	13	20	2.3	NA	Brown to light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
47			17	24	1.9	NA		
48	CL	[Diagonal hatching]	14	24	1.9	NA	Brown silty CLAY with fine sand seams, stiff, dry Interbedded with silty fine sand from 49-51'	
49								
50	SP	[Dotted pattern]	32	22	1.1	NA	Brown to light brown, fine to medium SAND , some silt, trace fine gravel, dense, moist	
51								
52	SW	[Dotted pattern]	25	22	1.6	NA	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
53								
54	SP	[Dotted pattern]	18	24	2.1	NA	Light brown, fine to coarse SAND , some fine to coarse gravel	
55							Light brown to tan, fine to medium SAND , trace clay seams, medium dense, moist	
56	CL	[Diagonal hatching]	18	24	2.1	NA	Brown to light brown, silty CLAY , very stiff, moist	
57							Orange-brown clayey SAND , medium dense, moist	
57	SP	[Dotted pattern]					Light brown, fine to medium SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 11/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
58		SP	31	24	1.5	NA	Brown to tan, fine to medium SAND , dense, moist Trace coarse sand and clay seams to 57.5'	NA = Not available (Rad data not recorded)
59							Medium dense	
60			24	20	1.5	NA		
61								
62	SP		19	24	2.0	NA		
63								
64			29	24	2.8	NA	Brown seam at 63.4'	
65							Tan to light brown	
66			21	24	2.6	NA		
67	EOB						NOTES: 1. Boring completed to 67' bgs on 11/11/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/12/04 4. Analytical samples from 19-64': a. On-Site radiological every foot b. On-Site nickel every even-numbered foot from 20-38' c. On-Site nickel every odd-numbered foot from 43-63' 5. SP samples collected at 40' and 65', analyzed on and off-Site for radioactivity, VOCs, and nickel	
68								
69								
70								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL04

Date Drilled: 11/15/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
11						BACKFILL Soil previously excavated to 15.5' bgs and backfilled	NA = Not available (PID data not recorded)
12							
13			5	24	NA		
14							
15			4	24	0.3		
16						Light brown, fine to coarse SAND , some fine to coarse gravel, loose to medium dense, moist	
17			17	24	0.5	Medium dense	
18							
19	SW		18	16	0.5		
20							
21			20	22	1.7		
22							
23			19	24	1.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL04

Date Drilled: 11/15/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
24	SW		25	22	0.9	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
25						Dense	
26	SP		33	24	1.4	Brown, fine to medium SAND , some fine to coarse gravel, trace silt, dense, moist	
27						Light brown, fine to coarse SAND , some fine gravel, dense, moist	
28	SW		36	24	1.2	Light brown, fine to coarse SAND , some fine gravel, dense, moist	
29						Light brown to brown, fine to medium SAND , trace fine gravel and coarse sand, dense, moist	
30	SP		46	24	1.0	Light brown to brown, fine to medium SAND , trace fine gravel and coarse sand, dense, moist	
31						Light brown to brown, fine to coarse SAND , trace fine to coarse gravel, dense, moist	
32	SW		34	22	1.1	Light brown to brown, fine to coarse SAND , trace fine to coarse gravel, dense, moist	
33						Medium dense	
34	SP		28	24	1.6	Medium dense	
35						Brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
36							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: E20 - DL04

Date Drilled: 11/15/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
37			39	24	2.5	Brown to dark brown, fine to coarse SAND , some fine gravel, dense, moist	
38						Brown to light brown, trace fine to coarse gravel, medium dense	
39	SW		23	22	2.6		
40						Trace fine gravel, dense	
41			34	22	3.1		
42							
43	SP		24	24	2.4	Light brown, fine to medium SAND , trace fine gravel and coarse sand, medium dense, moist	
44	SW					Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
45			14	20	3.4	Light brown to tan, fine to medium SAND , medium dense, moist	
46	SP						
47			17	24	2.0		
48	CL					Brown silty CLAY , very stiff, moist, silt seams at 48'	
48	SP					Light brown to tan fine to medium SAND , some silt, trace clay seams and fine gravel, medium dense, moist	
49			13	24	1.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL04

Date Drilled: 11/15/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
50	CL					Brown silty CLAY , stiff, dry	
51	SP		22	22	1.9	Light brown to orange-brown, fine to medium SAND , trace fine gravel and coarse sand, medium dense, moist Light brown to tan, gravel grades out	
52	CL					Brown silty CLAY , very stiff, moist	
53			25	20	4.7	Light brown to tan, fine to medium SAND , medium dense, moist	
54							
55			14	24	3.9	Orange-brown clayey sand seam at 54.6'	
56						Tan	
57	SP		20	22	4.0		
58							
59			16	24	2.8	Light brown Tan	
60							
61			18	22	2.1		
62							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL04

Date Drilled: 11/15/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
63			19	24	3.2	Tan, fine to medium SAND , medium dense, moist	
64	SP						
65			31	24	2.5	Orange-brown clayey sand seams at 64.4' and 65.4', dense	
66	EOB						
67						NOTES: 1. Boring completed to a depth of 66' bgs on 11/15/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/15/04 4. Analytical samples collected from 20-64' a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot c. SP sample at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL05

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
21		[Cross-hatched pattern]				BACKFILL Soil previously excavated to 26' bgs and backfilled	NA = Not available (PID data not recorded)	
22								
23								
24								
25			63	22	NA			
26		[Dotted pattern]				Light brown, fine to medium SAND , some coarse sand, very dense Tan, coarse sand grades out Light brown, trace coarse sand and fine gravel		
27			54	22	0.0			
28								
29			44	20	0.6			Increasing coarse sand to 30', dense
30	SP							Very dense
31			55	22	0.6			
32					Dense			
33			42	18	0.3			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville, NY

Log of Boring: E20 - DL05

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
34	SP	[Stippled Lithologic Symbol]				Light brown, fine to medium SAND, some coarse sand, trace fine gravel, dense		
35			33	20	0.4			
36							Brown, trace coarse sand, gravel grades out 3" fine to coarse layer at 35.5'	
37			45	23	1.1		Light brown, trace fine gravel	
38								
39			51	20	0.4		Light brown to tan, fine sand, some medium sand, very dense	
40								
41			37	14	0.0		Tan, fine to medium sand, some coarse sand, dense	
42								
43			28	18	0.0		Fine sand, trace medium sand, coarse sand grades out, medium dense	
44								
45	33	18	0.0		3" greenish tan followed by tan, coarse sand grades out			
46						Greenish tan		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL05

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
47	SP	[stippled pattern]	56	20	0.0	Tan, fine SAND , very dense 3" gravelly layer at 47.25'	
48	SC	[diagonal lines]				Light brown, clayey SAND	
49	CL	[diagonal lines]				Light brown, silty CLAY , hard	
49	SW	[stippled pattern]	147	24	0.0	Reddish brown, gravelly, fine to coarse SAND , some silt and clay, very dense	
50		[stippled pattern]				Light brown, fine to medium SAND , some coarse sand and silt, trace gravel	
51		[stippled pattern]	72	20	0.0		
52		[stippled pattern]				3" light orange-brown, silt, coarse sand and gravel grade out Tan, fine sand, trace medium sand	
53		[stippled pattern]	58	18	0.0		
54	SP	[stippled pattern]				Light brown to tan, dense	
55		[stippled pattern]	41	20	0.0		
56		[stippled pattern]					
57		[stippled pattern]	56	20	0.0		
58		[stippled pattern]				Interbedded tan and light reddish brown with trace silt from 57.25-58', very dense Tan, dense	
59		[stippled pattern]	32	21	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL05

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
60	SP					Tan, fine SAND, trace medium sand, dense		
61			45	22	0.0	1/2" brown seams from 60-5-61.5'		
62								
63			26	20	0.0	3" reddish tan layer at 62.75', medium dense		
64							3" reddish tan layer at 63.75' and 64' Very dense	
65			54	20	0.0			
66	EOB					NOTES: 1. Boring completed to a depth of 66' bgs on 11/3004 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/3004 4. Analytical samples collected from 26-64' a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot c. SP sample at 64', analyzed on and off Site for radioactivity, VOCs, and nickel		
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (2)

Date Drilled: 11/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
16							BACKFILL Soil previously excavated to 17' bgs and backfilled	
17							Fine to coarse SAND	E20-DL17 originated and completed to 26.5' bgs with a stainless steel hand auger on 8/6/04. Refusal was encountered at this depth, and the borehole was temporarily abandoned. See boring log E20-DL17(1) in the Main Report.
18								
19	SW							
20								
21								
22								
23								
24								
25							Medium to coarse SAND	
26	SP						Medium dense	E20-DL17 was continued from 27-42' using HSA drilling technique on 9/14/04, lithology contained in this boring log
27			27	16	0.0	11.5		
28	SW						Tan, fine to coarse SAND , trace fine gravel, medium dense, dry	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (2)

Date Drilled: 11/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
29			32	20	0.0	12.3	Tan, fine to coarse SAND , trace fine gravel, dense, dry	
30							Medium dense	
31			19	16	0.0	12.2		
32							Dense	
33			32	18	0.0	11.8		
34	SW						Dense, some fine gravel	
35			35	24	0.0	12.1	Light brown	
36								
37			32	22	0.0	12.5		
38							Brown, trace fine gravel, moist	
39			48	24	0.5	11.9	Orange-brown, some fine gravel Brown	
40								
41	SP		35	18	0.4	11.1	Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (2)

Date Drilled: 11/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft Interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
42	SP						Light brown, fine to medium SAND , trace fine gravel, dry	Boring resumed on 11/10/04 from 42-68' NA = Not available (PID data not recorded)
43	SW		24	22	0.7	NA	Dark brown grading to tan, fine to coarse SAND , some fine gravel, medium dense, dry Brown, trace fine gravel Light brown, trace fine to coarse gravel	
44	SP						Light brown, fine to medium SAND , trace coarse sand, medium dense, dry	
45	SW		21	22	2.1	NA	Light brown, fine to coarse SAND , trace fine gravel, medium dense, dry	
46							Brown to light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, dry	
47	SP		13	24	2.7	NA	Light brown to orange-brown, trace fine to coarse gravel	
49			18	24	2.2	NA		
50	CL						Brown, silty CLAY to clayey SILT , very stiff, moist	
51	SM		15	24	1.3	NA	Orange-brown, green, brown, and light brown, silty fine SAND , medium dense, moist	
51	CL						Brown, silty CLAY to clayey SILT , very stiff, moist	
53	SP		31	20	2.8	NA	Brown to orange-brown, fine to medium SAND , some fine to coarse gravel, trace coarse sand, dense, moist Light brown to tan, gravel grades out from 53.7-54'	
54								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (2)

Date Drilled: 11/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
	CL						Brown, silty CLAY , very stiff, moist	NA = Not available (PID data not recorded)
55			19	22	2.1	NA	Light brown to tan, fine to medium SAND , medium dense, moist	
56							Orange-brown, clayey sand layer	
57	SP		13	24	3.5	NA		
58								
59			15	24	4.4	NA		
60								
61			21	24	3.8	NA		
62							Tan	
63	SP		23	24	2.3	NA		
64								
65			21	24	2.8	NA		
66							Tan to light brown	
67			20	24	2.4	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (2)

Date Drilled: 11/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
68	SP						Tan to light brown, fine to medium SAND, medium dense, moist	
68	EOB						NOTES: 1. Boring completed to 68' bgs on 11/10/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/12/04 4. Analytical samples from 27-65': a. On-Site radiological every foot b. On-site nickel every odd-numbered foot 5. SP samples collected at 40' and 66', analyzed on and off Site for radioactivity, VOCs, and nickel	
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E22 - DL01

Date Drilled: 12/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
11						BACKFILL Soil previously excavated to 12.5' bgs and backfilled	NA = Not available (PID data not recorded)
12						No recovery	
13			30	0	NA	No recovery	
14							
15			40	0	NA		
16							
17	SP		44	6	0.2	Brown, fine to medium SAND , some fine gravel, dense, moist	
18						No recovery	
19			32	0	NA		
20							
21	SW		20	24	0.0	Light brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles to 22', medium dense, moist	
22							
23			22	23	1.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E22 - DL01
Date Drilled: 12/13/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Chris Ortolano



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
24	SW		21	24	1.4	Light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
25							
26							
27			28	24	0.3	Some fine gravel	
28						No recovery from 28-34'; lithology assumed to be the same as above and below	NA = Not available (PID data not recorded)
29		41	0	NA			
30							
31		59	0	NA			
32							
33			31	0	NA		
34							
35			15	20	0.0		
36	SW					Dark brown layer from 35.5-35.6', medium dense	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E22 - DL01

Date Drilled: 12/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
37	SP		37	10	0.0	Brown, fine to medium SAND , some fine to coarse gravel, trace cobbles, dense, moist	NA = Not available (PID data not recorded)
38						No recovery from 38-42'; lithology assumed to be the same as above and below	
39			36	0	NA		
40							
41			30	0	NA		
42	SP					Light brown to tan, trace fine gravel, cobbles grade out, medium dense	
43			29	24	2.0	Tan	
44							
45			25	24	1.2	Dense	
46							
47			40	24	5.6	Light brown, very dense	
48							
49			51	24	6.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E22 - DL01
Date Drilled: 12/13/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Chris Ortolano



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
50						Light brown, fine to medium SAND, trace fine gravel, very dense, moist Silty sand from 49.4-49.5' Tan, gravel grades out	
51			51	21	2.3		
52							
53			*WR	18	0.3		*WR = Weight of the rods
54							
55			18	21	0.8	Dark brown from 54.7-54.9', medium dense	
56	SP						
57			19	18	1.2		
58						Tan to orange-brown, trace fine gravel	
59			25	24	0.8		
60						Tan, gravel grades out	
61			16	24	1.7	Orange-brown layer from 60.9-61'	
62							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E22 - DL01

Date Drilled: 12/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
63		SP	21	19	1.8	Tan, fine to medium SAND, medium dense, moist	
64	SP						
65			24	22	2.7		
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to 66' bgs on 12/14/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/14/04 4. Analytical samples collected from 17-63': <ol style="list-style-type: none"> a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel 	
67							
68							
69							
70							
71							
72							
73							
74							
75							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E23 - DL01

Date Drilled: 12/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (In per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
11						BACKFILL Soil previously excavated to 13' bgs and backfilled	NA = Not available (PID data not recorded)
12							
13			13	12	NA	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
14							
15			11	18	0.0		
16						Light brown to tan, some fine to coarse gravel	
17			14	20	0.0		
18	SW					Silty sand seam at 17.6'	
19			11	22	0.1		
20							
21			10	24	0.5		
22							
23			14	24	0.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E23 - DL01

Date Drilled: 12/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
24						Light brown to tan, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
25			16	18	1.0		
26						Light brown, trace fine gravel	
27			18	24	0.9		
28						Light brown to tan, some fine to coarse gravel	
29			12	22	0.2		
30	SW						
31			12	24	0.8		
32							
33			10	20	1.1		
34							
35			11	22	0.8		
36							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E23 - DL01
Date Drilled: 12/12/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
37	SW		12	24	1.1	Light brown to tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
38						Dark brown, trace fine to coarse gravel	
39			14	24	0.8	Light brown, some fine to coarse gravel	
40					Light brown to tan, trace fine gravel		
41	SP		14	24	1.4	Light brown to tan, fine to medium SAND , trace fine gravel, medium dense, moist	
42						Trace coarse sand	
43			12	24	1.9		
44						Occasional cobbles to 46', loose	
45			6	12	1.0	Brown to light brown	
46						Light brown to tan, medium dense	
47					Orange-brown, trace silt seams to 48', coarse sand grades out		
48					Light brown to tan, gravel grades out		
49			20	20	3.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville; NY

Log of Boring: E23 - DL01

Date Drilled: 12/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
50	SP					Light brown to tan, fine to medium SAND , medium dense, moist		
51			13	20	3.6			
52							Orange-brown layer from 51.4-51.6'	
53			36	20	1.2		Dense	
54							Tan, medium dense	
55			18	20	1.0			
56								
57			18	20	4.1			
58								
59			16	24	1.3			
60						Orange-brown, trace coarse sand and fine gravel seam at 59.9'		
61	24	24	1.3					
62								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: E23 - DL01

Date Drilled: 12/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
63	SW		27	22	1.3	Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
64							
65	SP		21	24	1.0	Light brown to tan, fine to medium SAND , medium dense, moist	
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/15/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/15/04 4. Analytical samples collected from 14-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							
73							
74							
75							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
-1			27	10	0.0	Concrete	*Drill through top 9", blow count reported from bottom foot
0						FILL, dark brown, silty sand with fine to coarse gravel, moist	
1			6	13	0.2		
2						Trace cobbles	
3			11	5	0.0		
4						With cobbles	
5			42	17	0.0	Light brown, fine to coarse sand with fine to coarse gravel, some silt, moist	
6						1" light brown silty sand layer at 6.7'	
7			45	22	0.0		
8						Brown, fine to medium SAND, some fine to coarse gravel, trace cobbles, dense, moist	
9	SP		34	17	0.0		
10						Light brown, fine to coarse SAND with fine to coarse gravel, trace cobbles, very dense, moist	
11			55	22	0.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
12						Light brown, fine to coarse SAND with fine to coarse gravel, trace cobbles, very dense, moist	
13	SW		30	20	0.0	Dark brown, little fine gravel, cobbles and coarse gravel grade out, dense	
14						Black, some fine gravel, trace cobbles	
14						Light brown, some fine to coarse gravel	
14						Brown, little fine gravel, coarse gravel and cobbles grade out	
15	SP		24	22	0.0	Brown to dark brown, sand with fine gravel, little coarse gravel, medium dense 1" black layer at 14.4'	
16						Brown, fine to medium SAND , little fine gravel, medium dense, moist	
17			21	16	0.0	Light brown to brown, fine to coarse SAND with fine to coarse gravel, trace cobbles, medium dense, moist	
18							
19	SW		11	14	0.0		
20							
21			19	22	1.0	Tan to light brown fine to medium sand layer	
22						Light brown, cobbles grade out	
23	SP		11	14	0.0	Tan to light brown, fine to medium SAND , little fine gravel, medium dense, moist	
24							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
25	SP		25	20	0.7	Tan to light brown, fine to medium SAND , little fine gravel, medium dense, moist 2" dark brown to black, medium to coarse sand with fine to coarse gravel layer at 25'	
26							
27			22	15	0.0	Light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist Little fine gravel, coarse gravel grades out	
28							
29			20	20	0.6	Dark brown, some fine to coarse gravel Light brown, little fine gravel, coarse gravel grades out	
30						With fine to coarse gravel	
31	SW		27	22	0.5		
32						Trace cobbles	
33			24	20	2.6		
34						Light brown to brown with fine gravel, some coarse gravel, cobbles grade out, dense	
35			32	24	1.5		
36						Trace cobbles 4" brown to dark brown, little fine to coarse gravel layer at 36.5'	
37			24	22	1.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
38						Light brown to brown, fine to coarse SAND with fine gravel, some coarse gravel, trace cobbles, medium dense, moist	
39			29	20	1.0	Brown to dark brown 3" gravelly sand layer at 39.2'	
40							
41	SW		28	22	0.7	Light brown to brown, some fine to coarse gravel, cobbles grade out	
42						Little fine to coarse gravel	
43			20	24	2.6		
44						Dark brown with fine to coarse gravel Light brown, fine to medium SAND , dense, moist	
45	SP		31	24	1.0		
46	ML					Brown, clayey SILT , medium dense, moist	
47	SP		15	20	0.6	Light brown, fine to medium SAND , medium dense, moist	
48	SM					Brown, silty SAND , medium dense, moist	
49	ML					Brown, sandy SILT	
49	ML		19	22	0.0	Brown, fine to coarse SAND , trace fine gravel	
50	SW					2" sandy silt layer at 49.4'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
51	SW	[stippled]	16	24	0.0	Brown, fine to coarse SAND , trace fine gravel, medium dense	
51	ML	[vertical lines]	16	24	0.0	Brown, sandy SILT , medium dense, moist	
52		[stippled]				Brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
53	SW	[stippled]	55	23	0.0	Light brown to brown with fine to coarse gravel, very dense 1" silty sand layer at 52.4'	
54		[stippled]				Light brown, fine to medium SAND , some coarse sand, very dense, moist	
55	SP	[stippled]	75	22	0.7		
56	SM	[stippled]				Dense 5" red brown silty sand layer at 56'	
57	SP	[stippled]	33	20	0.5		
58		[stippled]				1" red brown silty sand layer at 57.8'	
59		[stippled]	34	20	0.5		
60	SP	[stippled]				2" dark brown to black layer at 60'	
61		[stippled]	39	24	1.1		
62		[stippled]					
63		[stippled]	36	19	0.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F18 - DL01

Date Drilled: 2/7/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
64	SP		29	22	0.8	Light brown, fine to medium SAND, some coarse sand, dense, moist	
65						Medium dense	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 2/8/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 2/8/05 4. Analytical samples from -1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL01

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
19						BACKFILL Soil previously excavated to 21' bgs and backfilled	
20							
21	SP		13	24	1.1	Brown, fine to medium SAND , trace fine gravel, medium dense, moist	
22						No recovery	
23			15	12	0.6	Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
24							
25			15	18	2.0		
26	SW						
27			29	24	1.6		
28							
29			17	24	0.8		
30	SP					Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
31			17	24	1.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL01

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft Interval)	PID Sample Screen (ppm)	Description	Remarks
32	SP					Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
33			20	24	3.3		
34	SW		16	24	2.3	Light brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
35							
36							
37			24	24	1.2		
38	SP		32	24	5.2	Light brown, fine to coarse SAND , some fine to coarse gravel, dense, moist	
39							
40	SW		19	22	4.4	Light brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
41							
42						Dark brown laminations from 41.3-41.8'	
43	SP		20	24	3.8	Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
44							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL01

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
45	SP		17	24	7.3	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
46							
47	SM		19	24	2.7	Brown, silty SAND with silt layers at 46.4' and 46.7', medium dense, moist	
48							
49	ML		21	24	2.3	Brown SILT , medium dense, moist	
50						Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
51						Very dense	
52			60	24	4.7		
53	SP		30	21	5.0	Tan to light brown, gravel grades out, dense	
54						Medium dense	
55			22	21	3.4		
56							
57			20	24	5.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL01

Date Drilled: 11/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
58						Tan to light brown, fine to medium SAND , medium dense, moist	
59			20	24	5.4	Orange-brown laminations from 58.6-58.9'	
60						Tan	
61			26	24	7.9		
62	SP					Orange-brown laminations from 61.4-61.7'	
63			23	18	5.1	Orange-brown layer from 62.9-63.2'	
64							
65			12	18	6.6		
66	EOB						
67						NOTES: 1. Boring completed to a depth of 66' bgs on 11/30/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/1/04 4. Analytical samples collected from 21-64' a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot c. SP sample at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL02

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
21			13	24	NA	BACKFILL Soil previously excavated to 23' bgs and backfilled	NA = Not available (PID data not recorded)
22							
23			15	24	0.0	Dark brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
24							
25	SW		25	18	0.0		
26							
27	SP		22	24	2.1	Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
28						Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
29			17	24	5.9		
30							
31	SW		39	24	5.1		
32							
33			34	21	4.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL02

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
34	SW		19	24	2.2	Brown, fine to coarse SAND , some fine to coarse gravel, dense, moist Medium dense	
35							
36							
37	SP		16	24	3.7	Brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
38							
39	SW		24	22	2.0	Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist Light brown to tan	
40							
41							
42	SP		30	24	2.9	Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
43							
44							
45	SW		29	24	14.3		
46							
47	SP		19	24	12.6		
48							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL02

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
47	SP	[Symbol]	15	24	3.3	Tan, fine to medium SAND, trace fine gravel, medium dense, moist	
	ML	[Symbol]				Brown, sandy SILT, medium dense, moist	
	SP	[Symbol]				Tan, fine to medium SAND, medium dense, moist	
48	SM	[Symbol]				Brown, silty SAND, trace fine gravel, medium dense, moist Loose	
49	CL	[Symbol]	8	24	1.2	Brown, silty CLAY, medium stiff, moist	
50	SM	[Symbol]				Brown, silty SAND, trace fine gravel, dense, moist	
51	SW	[Symbol]	45	24	4.2	Brown, fine to coarse SAND, some fine gravel, dense, moist	
52		[Symbol]				Tan, fine to medium SAND, dense, moist	
53		[Symbol]	49	20	7.8		
54		[Symbol]					
55	SP	[Symbol]	32	24	3.1		
56		[Symbol]					
57		[Symbol]	34	24	5.1		
58		[Symbol]				Orange-brown banding from 58-58.6', medium dense	
59		[Symbol]	18	24	8.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL02

Date Drilled: 11/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
60		SP				Tan, fine to medium SAND , medium dense, moist	
61			27	24	6.3	Medium dense	
62							
63			24	21	4.7		
64							
65			22	24	9.6		
66	EOB					NOTES: 1. Boring completed to a depth of 66' bgs on 11/29/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/1/04 4. Analytical samples collected from 20-64' a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot c. SP sample at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL03

Date Drilled: 11/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Aimiee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
11						BACKFILL Soil previously excavated to 16' bgs and backfilled	
12							
13							
14							
15							
16							
17			19	22	0.0	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
18							
19			24	22	0.0	Some fine to coarse gravel	
20	SW					Light and dark brown	
21			20	18	0.0		
22							
23			18	19	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL03

Date Drilled: 11/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
24						Light and dark brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
25			25	20	0.0		
26						Trace silt to 27.5'	
27			21	22	2.2		
29	SW		29	22	0.4		
30						Light brown to tan, gravel grades out, dense	
31			34	16	0.8	Light brown to brown, some fine gravel	
32						Medium dense	
33			22	22	1.5		
34							
35			28	20	1.5		
36	SP					Dark brown, fine to medium SAND , some fine gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL03

Date Drilled: 11/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
37	SW		27	20	1.0	Light brown to brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
38	SP					Dark brown to black, coarse SAND , some fine gravel, medium dense, moist	
39	SW		33	24	2.2	Light brown, fine to coarse SAND , some fine to coarse gravel, dense, moist	
40							
41			34	24	1.4	Tan, fine to medium SAND , some fine gravel, dense	
42						Very dense	
43	SP		58	24	1.5		
44						Dense	
45	SW		46	24	0.3	Light brown, fine to coarse SAND with fine to coarse gravel, dense	
46						Light brown, silty CLAY , hard	
47	CL		44	22	0.4		
48						Tan, fine SAND , very dense	
49	SP		144	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEGSI, Hicksville, NY

Log of Boring: F20 - DL03

Date Drilled: 11/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	SC					Tan, fine clayey SAND , very dense	
50						Reddish tan, fine to medium SAND , trace coarse sand, very dense	
51	SP		64	24	0.0	3" tan, fine to coarse, some fine gravel Orange-tan, fine sand, very dense	
52						Orange-tan, fine SAND , very dense	
53			63	17	0.0	Tan, very dense	
54						Dense	
55			31	23	2.1		
56						Medium dense	
57			22	20	1.1		
58						1/4" reddish brown seam at 58.25'	
59	SP		16	20	1.3		
60						Very dense	
61			84	23	0.8	1/4" reddish brown seam at 61'	
62							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: F20 - DL03
Date Drilled: 11/18/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Kyle Strumfels, Aimee Clark



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
63	SP		58	20	2.0	Tan, fine SAND, very dense 1/4" reddish brown seam at 62.5'	
64			53	14	1.7		
65							
66	EOB					NOTES: 1. Boring completed to a depth of 66' bgs on 11/19/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/1/04 4. Analytical samples collected from 16-63' a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							
74							
75							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: F21 - DL01
Date Drilled: 12/2/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
21						BACKFILL Soil previously excavated to 25' bgs and backfilled	
22							
23							
24							
25			13	12	0.2	Orange-brown, fine to medium SAND , some coarse sand and gravel, medium dense	
26						Light brown, some fine gravel, trace coarse gravel	
27			21	18	0.0		
28						Light brown to brown	
29	SP		24	16	0.8		
30						Light brown, trace coarse sand and gravel	
31			24	22	0.5	1/8" dark brown, fine seam at 31'	
32							
33			22	20	1.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL01

Date Drilled: 12/2/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
34	SP					Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense	
35	SW		33	17	0.0	Light brown, fine to coarse SAND , some gravel, dense	
36						Dark brown, medium to coarse SAND , trace fine gravel, medium dense	
37	SP		24	16	0.0	Brown, fine to medium sand, some coarse sand, gravel grades out Light brown, trace coarse sand	
38							
39	SW		22	18	0.0	Light brown, fine to coarse SAND , some fine gravel	
40						Light brown, fine to medium SAND , some coarse sand and fine gravel, medium dense	
41			27	20	0.6		
42						Coarse sand and gravel grade out	
43	SP		26	22	0.9		
44						Brown laminations from 43.5-44' Dense	
45			33	18	3.0		
46							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI; Hicksville, NY
Log of Boring: F21 - DL01
Date Drilled: 12/2/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Aimee Clark



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	SP					Light brown, fine to medium SAND , medium dense	
47	CL		29	20	0.8	Light brown, silty CLAY , very stiff	
48						3" tan, fine sand layer from 47.25-47.5'; some gravel from 47.5-48'	
49			42	20	1.4	Brown, fine to medium SAND , trace coarse sand and gravel to 48.25', dense	
50							
51			47	20	2.8		
52						Tan, fine sand, gravel grades out, moist	
53	SC SP		37	20	2.2	1.5" reddish brown, clayey sand at 53'	
54						Medium dense	
55			15	16	3.0		
56						Dense	
57			38	22	3.2		
58						4" reddish brown layer at 57.7'	
59			37	22	3.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL01

Date Drilled: 12/2/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
60	SP					2" reddish brown followed by tan, fine SAND , dense, moist		
61			51	22	5.3	Very dense		
62							2" reddish brown layer at 61.5'	
63			38	22	2.7	Dense	4" reddish brown layer at 62.9'	
64								
65			46	22	2.0			
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/3/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/3/04 4. Analytical samples collected from 25-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel		
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL02

Date Drilled: 12/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
18						BACKFILL Soil previously excavated to 18' bgs and backfilled	
19			14	20	0.0	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
20							
21	SW		18	22	0.2	Light brown to brown	
22						Some fine to medium gravel	
23			15	22	0.0		
24							
25	SP		17	18	0.0	Tan, fine to medium SAND , some gravel, medium dense, moist	
26							
27			24	20	0.0	Tan, fine to coarse SAND , some fine to medium gravel, medium dense, moist	
28	SW						
29			9	22	0.7	1" reddish brown, fine to medium sand seam, loose	
30							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL02

Date Drilled: 12/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
31	SP		10	20	0.3	Light brown, fine to medium SAND, some gravel, loose, moist	
32							
33			9	24	0.9		
34							
35			8	22	0.3	Trace cobbles	
36							
37			10	22	0.5		
38							
39			7	20	0.5	Tan, trace gravel	
40							Medium dense
41	11	22	1.1	Some fine to medium gravel, medium dense			
42							
43	12	24	2.8				

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL02

Date Drilled: 12/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
44	SP	[stippled]				Tan, fine to medium SAND , trace gravel, medium dense, moist	
45	SW	[stippled]	33	22	2.0	Tan to light brown, fine to coarse SAND , trace gravel, dense, moist	
46	SP	[stippled]				Tan, fine to medium SAND , trace fine gravel, dense, moist	
47	SP	[stippled]	35	20	3.2		
48	SM	[vertical lines]				Light brown, silty SAND , trace fine to medium gravel, dense, moist	
49		[stippled]	46	24	2.5	Brown, fine to medium SAND , trace gravel, dense, moist Tan to light brown, some gravel	
50		[stippled]					
51	SP	[stippled]	33	20	2.3		
52		[stippled]				Gravel grades out, medium dense	
53		[stippled]	26	20	0.0		
54		[stippled]					
55		[stippled]	10	19	0.6		
56		[stippled]					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL02

Date Drilled: 12/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
57		SP	30	21	1.2	Tan to light brown, fine to medium SAND, medium dense, moist Dark brown banding	
58						Trace fine gravel	
59			20	22	2.8	0.2' silty sand seam	
60						Gravel grades out	
61			29	24	5.0		
62							
63			28	19	2.6		
64							
65		12	22	3.8			
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/8/04 4. Analytical samples collected from 18-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F22 - DL01

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
22						BACKFILL Soil previously excavated to 26' bgs and backfilled	NA = Not available (PID data not recorded)
23			8	24	NA		
24							
25			5	24	NA		
26							
27			12	19	6.6	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
28	SW						
29			10	19	0.3		
30						Some fine gravel, loose	
31	SP		9	24	0.0	Light brown, fine to medium SAND , trace fine gravel, loose, moist	
32	SW					Light brown, fine to coarse SAND , some fine gravel, loose, moist	
						0.2' silt seam, medium dense	
33	SP		11	24	0.2	Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
34							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: F22 - DL01

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
35	SP		9	20	0.7	Light brown, fine to medium SAND , some fine to coarse gravel, loose, moist	
36							
37	SW		13	24	0.6	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
38							
39			8	21	0.8	Light brown, fine to medium SAND , trace fine gravel, loose, moist	
40						Medium dense	
41			11	24	0.8		
42	SP					Loose	
43			6	18	0.6		
44						Tan, gravel grades out	
45			6	18	0.9		
46						Medium dense	
47			26	24	0.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F22 - DL01

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
48	SP					Tan, fine to medium SAND , medium dense, moist	
49	SM		32		0.7	Brown, fine to medium silty SAND , trace fine gravel, medium dense, moist	
50						Tan, fine to medium SAND , dense, moist	
51			45	21	0.5	0.1' silty sand seam	
52						Medium dense	
53			14	24	2.1		
54	SP					Loose	
55			9	22	2.1		
56						Medium dense	
57			16	24	1.2		
58							
59			13	24	0.7	Orange-brown banding	
60							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F22 - DL01

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
61	SP		18	24	3.9	Tan, fine to medium SAND , medium dense, moist Loose	
62							
63			20	24	3.3		
64							
65			8	24	3.9		
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/9/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/10/04 4. Analytical samples collected from 26-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOST, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
-1			11	10	0.0	Concrete	
0						FILL, dark brown, sandy silt, little fine to coarse gravel, trace clay, dry	
1			7	16	0.0	Mottled with white silt to 2'	
2						Brick and concrete debris	
3			16	9	0.0		
4						Moist	
5			103	12	0.0	Concrete layer from 5.2-6.7'	
6							
7			11	14	0.0	Wood debris, degraded organics	
8						GRAVEL and fine to coarse SAND, medium dense, moist	
9	GW		20	16	1.6	Tan, fine to medium SAND, medium dense, moist	
10	SP					Trace brown seams to 11', trace coarse sand and fine to coarse gravel	
11			26	20	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
12	SP					Tan with trace brown seams to 12', fine to medium SAND , trace coarse sand and coarse gravel, medium dense, moist	
13			13	15	0.0	Fine to coarse gravel	
14						Tan, fine to coarse SAND , some coarse gravel, medium dense, moist	
15	SW		26	19	0.0	Brown, some fine gravel, coarse gravel grades out	
16	SP					Tan, fine to medium SAND , some fine to coarse gravel, moist Trace fine gravel	
17			18	15	0.0	Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
18						Little gravel	
19			17	15	0.0		
20	SW					Some gravel	
21			18	19	1.0		
22							
23	SP		11	15	0.0	Tan, fine to medium SAND , trace coarse gravel, medium dense, moist	
24	SW						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
25	SW SP		17	19	0.0	Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
26						Tan, fine to coarse SAND , some fine gravel, moist	
26						Tan, fine SAND , medium dense, moist	
26	SW					Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
27			25	16	0.0		
28							
29	SP		20	16	1.0	Tan with brown, fine to medium SAND , little fine gravel, medium dense, moist	
30							
30	SW					Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
31	SP		25	11	1.6	Brown, medium to coarse SAND , some fine sand, medium dense, moist	
31						Tan, fine to medium sand, trace fine gravel	
32	SW					Tan, fine to coarse SAND and fine gravel, moist	
32						Some fine to coarse gravel	
33			25	20	2.0		
34	SP					Tan, fine to medium SAND , medium dense, moist	
35							
35	SW		25	22	1.7	Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
36	SP					Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
36						Tan, fine to coarse SAND , some fine gravel, medium dense, moist	
37	SW		18	17	1.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
	SW					Tan, fine to coarse SAND, some fine gravel, medium dense, moist	
38	GP					Brown, fine GRAVEL and fine to coarse SAND, moist	
39			36	13	1.0	Tan, fine to coarse SAND, little fine to coarse gravel, trace cobbles, dense, moist	
40	SW					Dark tan to brown, some fine to coarse gravel, trace silt	
41			36	17	1.6	1" black, medium to coarse sand with fine gravel layer at 40' Tan, trace fine gravel	
42						Tan, fine to medium SAND, dense, moist	
43			23	18	3.7	Medium dense	
44						1" medium to coarse sand with fine gravel layer at 43.6'	
45	SP		24	22	2.5	2" brown, fine, medium dense layer at 45.5'	
46						Tan and brown, fine sand, trace silt	
47			19	17	1.7	1" fine to coarse layer at 47.6'	
48						Tan, silt grades out	
49	ML		12	19	1.1	Tan SILT, trace to some clay, medium dense, moist	
50	SP					Tan, fine sand at 49.3'	
						Tan to white, fine SAND, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
51	CL		12	10	0.7	Tan, silty CLAY with silt seams, stiff, moist	
52	SP					Tan, fine SAND , moist, dense 1" brown, sandy silt layer at 52.5'	
53	SW		48	11	0.3	Tan, fine to coarse SAND and fine gravel, some coarse gravel, dense, moist Dark brown	
54							
55	SP		56	20	0.5	Tan to white, fine SAND , trace silt to 54', very dense, moist	
56							
57	SM		29	17	0.0	Brown and tan, silty fine SAND , medium dense, moist	
58						Tan, fine SAND , medium dense	
59			18	17	0.0	Tan to white, trace silt	
60	SP						
61			23	20	0.0		
62							
63			10	16	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G18 - DL01

Date Drilled: 1/14/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
64	SP					Tan to white, fine SAND , trace silt, medium dense	
65			1	18	0.0	Very loose	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 1/18/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/18/05 4. Analytical samples from +1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL01

Date Drilled: 12/2/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
18						BACKFILL Soil previously excavated to 19' bgs and backfilled	
19			8	22	0.1	Light brown, fine to coarse SAND , some fine to coarse gravel, loose, moist	
20							
21			7	20	1.0		
22						Medium dense	
23			12	20	1.3		
24							
25	SW		10	22	2.0		
26						Light brown to brown, coarse gravel grades out	
27			15	20	1.0		
28							
29			17	24	0.5		
30							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL01

Date Drilled: 12/2/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
31	SW		16	22	2.7	Light brown to brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist		
32								
33			22	24	8.7			
34							Brown to light brown, trace fine gravel	
35			14	24	4.0			
36							Light brown	
37			10	22	4.8			
38							Some fine to coarse gravel, trace cobbles	
39			14	24	4.4			
40							Light brown to brown, trace gravel, cobbles grade out	
41	9	20	10.6					
42					Light brown, orange-brown, and brown, some gravel			
43			17	24	8.4			

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: G19 - DL01
Date Drilled: 12/2/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
44	SW	[stippled]				Light brown, orange-brown, and brown banded, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
45		[stippled]	13	24	7.9	Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist	
46		[stippled]				Loose	
47	SP	[stippled]	7	24	8.0		
48		[stippled]				2" clayey silt layer at 47.8'	
49		[stippled]	6	20	6.1		
50	SM	[vertical lines]				Brown to orange-brown, fine silty SAND , trace clay seams, loose, moist	
50	SW	[stippled]				Brown, fine to coarse SAND , trace fine gravel, wet	*WR = Weight of rods
51	CL	[diagonal lines]	WR	24	2.3	Brown silty CLAY , trace silt seams, very soft, moist	
52		[stippled]					
53	SP	[stippled]	54	24	4.1	Brown to light brown, fine to medium SAND , trace coarse sand and fine gravel, intermittent clay layers, very dense, moist	
54	SW	[stippled]				Light brown, fine to coarse SAND , some fine to coarse gravel, very dense, moist	
54	CL	[diagonal lines]				Brown silty CLAY , very stiff, moist	
55	SP	[stippled]	25	24	9.0	Light brown to tan, fine to medium SAND , medium dense, moist	
56							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL01

Date Drilled: 12/2/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
57	CL		16	24	4.0	Light brown to tan, fine to medium SAND , medium dense, moist Orange-brown, clayey sand layer at 56.4'	
58						Orange-brown, clayey sand layer at 57'	
59			14	18	2.2	Tan	
60							
61	SP		14	20	6.1		
62	CL					Orange-brown, clayey sand layer at 61.5'	
63			7	22	2.7		
64							
65			8	24	4.2		
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/3/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/3/04 4. Analytical samples collected from 19-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: G19 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
13						BACKFILL Soil previously excavated to 16.5' bgs and backfilled	NA = Not available (PID data not recorded)
14							
15							
16							
17			8	24	NA		
18							
19			8	12	NA		
20							
21			6	24	2.0	Light brown, fine to coarse SAND , some fine gravel, loose, moist	
22						Some fine to coarse gravel, medium dense	
23	SW		13	22	2.1		
24							
25			18	20	2.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
26	SW					Light brown, fine to coarse SAND, some fine gravel, medium dense, moist		
							Light brown to brown	
27			22	20	3.3			
28							Trace fine gravel	
29			14	24	3.3			
30							Trace fine to coarse gravel	
31			20	24	3.2			
32								
33			21	22	3.1			
34							Light brown, some fine gravel	
35	12	24	5.6					
36					Brown to light brown, some fine to coarse gravel, trace cobbles			
37	17	24	1.8					
38								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39	SW		14	24	4.5	Brown to light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
40	SP					Light brown, fine to medium SAND , trace fine gravel and coarse sand, medium dense, moist	
41			16	24	4.6	Brown to light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
42	SW					Orange brown, trace fine to coarse gravel	
43			18	18	14.0		
44						Light brown, fine to medium SAND , trace coarse sand, medium dense, moist	
45	SP		10	24	9.5	Trace fine gravel	
46	SM					Light brown, silty fine SAND , moist	
47	CL		NA	20	2.8	Brown, silty CLAY , moist	NA = Not available (blow counts not recorded)
48	SM					Brown to light brown, silty fine SAND , moist	
49	CL		4	18	2.5	Brown, silty CLAY , soft, moist	
50							
51	SP		58	24	2.9	Light brown, fine to medium SAND , trace silt, very dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
52	SP					Light brown, fine to medium SAND , trace silt, very dense, moist 0.2' brown, clayey silt layer Light brown to dark brown, some fine gravel	
53	SW		25	18	3.3	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist Tan, gravel grades out	
54						Tan, fine to medium SAND , medium dense, moist	
55			29	22	3.4	Tan to light brown	
56						0.1' clayey sand layer Tan	
57			21	20	4.4		
58							
59	SP		26	18	3.5		
60						Dense	
61			37	20	6.5		
62							
63			41	20	9.8		
64							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL02

Date Drilled: 12/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
65	SP		34	24	6.8	Tan, fine to medium SAND, dense, moist	
66	EOB					NOTES: 1. Boring completed to 66' bgs on 12/13/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/13/04 4. Analytical samples collected from 21-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL01 (2)

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
36						BACKFILL Soil previously excavated to 43' bgs and backfilled	
37							
38							
39							
40							
41							
42							
43			2	22	3.0	Brown, fine to medium SAND , trace fine gravel, very loose, moist	
44						Medium dense	
45	SP		11	24	13.8		
46						Light brown, clay seam 47.6-47.8'	
47			10	24	8.7		
48							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL01 (2)

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
49	CL		9	24	3.3	Light brown to brown, interbedded silty CLAY and fine to medium sand, stiff, moist	
50	SP					Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
51	CL		11	24	1.1	Brown CLAY , stiff, moist	
52						Brown, fine to medium SAND , some fine gravel and silt, medium dense, moist	
53			27	24	0.1	Light brown, silt grades out Tan, moist	
54							
55			25	22	3.2		
56	SP						
57			11	22	1.5		
58							
59			14	24	4.2		
60						Light brown to tan	
61			12	24	1.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL01 (2)

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
62	SP					Light brown to tan, fine to medium SAND, some fine gravel, medium dense, moist	
63			6	24	6.6	Tan, loose	
64							Medium dense
65			19	24	3.9		
66	EOB					NOTES: 1. Boring completed to a depth of 66' bgs on 9/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/4/04 4. Analytical samples from 43-63': a. On-Site radiological samples at every foot b. On-Site nickel samples every odd-numbered foot 5. SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
67							
68							
69							
70							
71							
72							
73							
74							

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: G20 - DL04 (2)
Date Drilled: 10/1/04
Sampler Type: 3" split spoon with 300-lb hammer
Logged By: Chris Ortolano



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
46						BACKFILL Soil previously excavated to 50' bgs and backfilled (see hand auger log dating from 7/15/04)	
47							
48							
49							
50	CL					Brown, silty CLAY , very stiff, moist	
51	SP		20	24	1.1	Brown, fine to medium SAND , some silt, trace fine gravel, medium dense, moist	
52	CL					Brown, silty CLAY , very stiff, moist	
53			25	24	2.4	Brown, fine to medium SAND , trace silt and fine gravel, medium dense, moist	
54						Light brown, silt grades out, dense	
55			31	24	1.8	Clay seam	
56	SP					Tan, gravel grades out, loose	
57			10	24	3.2		
58							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL04 (2)

Date Drilled: 10/1/04

Sampler Type: 3" split spoon with 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
59			11	24	6.7	Tan, fine to medium SAND , medium dense, moist	
60							
61			6	24	2.9	Tan with orange-brown banding, loose	
62	SP						
63			10	24	7.8	Tan Medium dense	
64							
65			26	24	3.6		
66	EOB						
67							
68							
69							
70							
71							

NOTES:

1. Boring completed to a depth of 66' bgs on 10/1/04
2. Groundwater not encountered
3. Boring backfilled to grade with clean soil on 10/4/04
4. Analytical samples:
 - a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 50-63' bgs
 - b. SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL06 (2)

Date Drilled: 9/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36							BACKFILL Soil previously excavated to 42.5' bgs and backfilled	
37								
38								
39								
40								
41								
42								
43	SP		3	18	0.8		Brown, fine to medium SAND , trace fine gravel, very loose, moist	NA = Not available (PID data not recorded)
44							No recovery	
45			7	0	NA			
46							Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
47	SP		10	24	2.4			
48								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL06 (2)

Date Drilled: 9/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
49	CL		9	24	1.3		Light brown to brown, interbedded silty CLAY and fine to medium sand, stiff, moist to wet	
50								
51			9	24	2.1		Brown, fine to coarse SAND , some fine gravel, trace silt, loose, moist	
52							Light brown, trace clay seams, medium dense, moist	
53	SW		17	20	3.1			
54							Brown, fine gravelly sand, moist	
55			20	24	1.0			
56							Light brown, fine to medium SAND , medium dense, moist Light brown to tan, loose	
57			6	18	2.8			
58	SP							
59			5	24	3.9		Tan, moist, loose Orange-brown	
60								
61			4	24	3.3		Light orange-brown, light brown and medium brown mottled, very loose, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL06 (2)

Date Drilled: 9/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
62	SP						Tan, fine to medium SAND, very loose, moist	
63			7	24	3.6			
64								Medium dense
65			18	24	6.3			
66	EOB							
67							NOTES: 1. Boring completed to a depth of 66' bgs on 9/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/4/04 4. Analytical samples from 42-63': a. On-Site radiological samples every foot b. On-Site nickel samples every odd-numbered foot 5. SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
68								
69								
70								
71								
72								
73								
74								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL11

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21							BACKFILL Soil previously excavated to 27' bgs and backfilled	
22								
23			6	24				
24								
25			4	24				
26								
27			8	24	2.4			
28							Brown, fine to coarse SAND , some fine to coarse gravel, loose, moist	
29	SW		15	24	8.5		Light brown, trace fine gravel, medium dense	
30							Orange-brown to light brown, some fine gravel	
31			14	19	2.5		Brown, some fine to coarse gravel	
32	SP						Light brown, fine to medium SAND , medium dense, moist	
33	SW		11	22	2.1		Brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
							Light brown, some fine gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL11

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
34							Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
35			11	24	2.5		Light brown to tan, gravel grades out Light brown, some fine to coarse gravel	
36								
37			13	24	5.3			
38								
39	SW		12	24	4.8		Brown banding 39.2-39.5' Dark brown banding 39.7-39.8' Trace fine to coarse gravel	
40								
41			10	24	2.5			
42							Trace fine gravel	
43			11	24	1.3		Orange-brown, some fine gravel	
44								
45	SP		8	20	1.7		Light brown, fine to medium SAND , trace fine gravel, loose, moist	
46	SW						Light brown, fine to coarse SAND , trace fine to coarse gravel, loose, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL11

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47	SW		8	22	1.8		Light brown, fine to coarse SAND , trace fine to coarse gravel, loose, moist Trace fine gravel	
48	SP						Light brown, fine to medium SAND , loose, moist	
49	CL		6	24	1.5		Light brown, silty CLAY , medium stiff, moist	
	ML						Light brown, silty fine SAND , loose, moist, clay seam at 49.5'	
50	SP						Light brown, fine SAND , trace silt, loose, wet Silt grades out, moist	
51	CL		7	24	0.0		Light brown, silty CLAY , medium stiff, moist Clayey silt, fine to medium sand seam	
52	GP						Brown, sandy GRAVEL , fine to medium sand, some silt, loose, moist	
	CL						Light brown, silty CLAY with sand seams, very stiff, moist	
53	SW		22	24	1.2		Light brown, fine to coarse SAND , trace silt, some fine gravel, medium dense, moist	
54							Silt grades out, moist	
55	SP		25	20	2.5		Tan to light brown, fine to medium SAND , medium dense, moist	
56	SW						Brown, silty fine to coarse SAND , some fine gravel, trace clay lenses, medium dense, moist	
57			11	24	2.0		Light brown to tan, fine to medium SAND , medium dense, moist Orange-brown clayey sand layer from 57-57.2'	
58	SP						Tan	
59			10	22	0.6		Light brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL11

Date Drilled: 9/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
60		SP					Light orange-brown, fine to medium SAND , medium dense, moist		
61			9	20	1.3		Light orange-brown, loose, moist, clayey sand lens 60-60.2'		
62							Tan, moist		
63				8	24	2.2		Tan	
64								Light orange-brown, trace clay	
65			10	24	3.4		Tan		
66	EOB						NOTES: 1. Boring completed to a depth of 66' bgs on 9/27/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/30/04 4. Analytical samples from 27-63': a. On-Site radiological samples at every foot b. On-Site nickel samples every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel		
67									
68									
69									
70									
71									
72									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL12

Date Drilled: 10/5/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
21							BACKFILL Soil previously excavated to 22' bgs and backfilled	
22								NA = Not available (PID data not recorded)
23	SP		6	24	NA		Light brown, fine to medium SAND , trace fine gravel and root material, loose, moist, backfill material	
24								
25			7	20	NA			
26	SW						Light brown, fine to coarse SAND , trace fine gravel, medium dense, dry	
27	SP		12	24	0.5		Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
28							Brown, fine to coarse SAND , some fine gravel, medium dense, moist	
29	SW		26	20	2.0		Light gray cemented sand and gravel Orange brown to brown	
30							Brown, trace cobbles	
31			17	20	2.9		Trace fine gravel	
32								
33	SP		13	24	2.0		Light brown, fine to medium SAND , trace fine to coarse gravel and coarse sand, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL12

Date Drilled: 10/5/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34	SP						Light brown, fine to medium SAND , trace fine to coarse gravel and coarse sand, medium dense, moist	
35			17	24	3.3		Light brown to brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
36							Brown, some fine gravel, dry	
37			19	24	2.8		Light brown, some fine gravel, moist	
38	SW						Dark brown with greenish brown seams Light brown, trace cobbles	
39			19	24	4.7		Dark brown, some fine to coarse gravel Light brown	
40							Light brown to brown	
41			14	22	3.2		Light brown to tan, some fine gravel, trace cobbles, dry	
42	SP						Light brown to tan, fine to medium SAND , trace fine to coarse gravel and coarse sand, medium dense, dry	
43			17	24	4.9		Light brown, some fine gravel	
44	SW						Dark brown to red brown, fine to coarse SAND , some gravel, medium dense, dry Light brown to tan	
45	SP		28	24	4.6		Light brown to brown, some fine gravel Tan to light greenish tan, fine to medium SAND , trace fine gravel and coarse sand, medium dense, moist	
46								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL12

Date Drilled: 10/5/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
47	SP	[Symbol]	12	18	5.3		Light brown, fine to medium SAND , trace fine gravel and coarse sand, medium dense, moist	
48							1" brown, fine to coarse sand seam	
49	CL	[Symbol]	10	24	2.8		Interbedded brown silty CLAY and tan fine to medium SAND , stiff, moist	
50	SM	[Symbol]					Light brown, silty fine SAND , loose, moist 1" clay seam at 49.4'	
51	CL	[Symbol]	10	22	7.9		Trace cobbles Brown, silty CLAY with fine sand seams, stiff, moist to wet	
52	CL	[Symbol]					Brown to light brown, fine to medium SAND , some silt, trace fine gravel, loose, moist	
53	SP	[Symbol]	21	24	3.9		Silt grades out, medium dense 3" brown silty clay layer at 52.1'	
54	SW	[Symbol]					Light brown, fine to coarse SAND , some gravel, medium dense, dry	
55			30	22	6.2		Tan, fine to medium SAND , dense, moist	
56	SP	[Symbol]					Light brown to tan, loose	
57			10	18	4.6			
58							Tan, medium dense	
59			15	24	3.3			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL12

Date Drilled: 10/5/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
60	SP						Tan, fine to medium SAND, medium dense, moist	
61			8	22	2.4	Loose		
62						Orange brown, some clay, moist		
63			13	24	4.4	Tan, medium dense		
64						Orange brown bands at 63.0 and 63.6		
65			23	24	7.0	moist		
66	EOB						NOTES: 1. Boring completed to a depth of 66' bgs on 10/5/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/6/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every other foot from 26-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for	
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL09

Date Drilled: 10/1/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
32							BACKFILL Soil previously excavated to approximately 32' bgs and backfilled	
33	SW		12	24	0.2		Backfill material found from 32 - 33' bgs Brown, fine to coarse SAND , some fine gravel, trace cobbles, medium dense, moist	
34							Brown, fine to medium SAND , some fine gravel, medium dense, moist	
35	SP		16	24	0.3			
36							Tan, fine to coarse SAND , trace fine gravel, medium dense, moist	
37			20	24	4.3			
38							Light brown, fine to medium SAND , some fine gravel, trace cobbles, medium dense, moist	
39	SW		21	24	1.2			
40							Trace fine gravel, cobbles grade out 2" dark brown layer at 42.6'	
41			18	22	1.4			
42	SP							
43			17	22	1.9			
44								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL09

Date Drilled: 10/1/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
45			17	24	4.8		Tan to light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
46	SP							
47			11	24	8.9			
48							Brown, gravel grades out	
49	CL		13	24	4.6		Brown, CLAY , trace silt, stiff, moist	
50	SP						Light brown, fine to medium SAND , medium dense, moist	
51			18	24	3.4		Brown, some fine gravel Silty clay lenses at 50.6'	
52	CL						Brown, CLAY , very stiff, moist	
53			19	24	6.5		Brown, fine to medium SAND , trace fine gravel, medium dense, moist	
54	SP						Light brown	
55			13	24	3.8			
56							Loose	
57			6	24	3.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL09

Date Drilled: 10/1/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
58							Light brown, fine to medium SAND , trace fine gravel, loose, moist	Collected samples at 58.3' and 58.4'
59			5	24	7.4		Orange-brown to tan, loose Soil discoloration at 58.3' and 58.4'	
60								
61	SP		6	24	3.1			
62							Gravel grades out, loose	
63			8	24	2.2			
64								
65			6	NA	5.8			NA = Not available (recovery not recorded)
66	EOB						NOTES: 1. Boring completed to a depth of 66' bgs on 10/4/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/4/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 32-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for radioactivity, VOC and nickel and off Site for beryllium	
67								
68								
69								
70								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL10

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
26						BACKFILL Soil previously excavated to 27' bgs and backfilled	
27			12	24	0.5	Light brown, fine to medium sand, trace fine gravel, moist	
28	SW					Brown, fine to coarse SAND , some fine gravel, medium dense, moist	
29			26	20	2.0		
30	SP					Brown to light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
31			17	20	2.9	Brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
32	SW					Brown to light brown	
33			13	24	2.0		
34							
35			17	24	3.3		
36						Light brown, dry	
37			19	24	2.8		
38							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: G21 - DL10

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39			19	24	4.7	Brown to light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
40						Dark brown lenses Light brown to brown, trace fine to coarse gravel	
41	SW		14	22	3.2		
42							
43			17	24	4.9	Dark brown lens Light brown with white specks	
44						Light brown, fine to medium SAND , medium dense, moist	
45			28	24	4.6	Trace coarse sand, trace fine gravel	
46	SP						
47			12	18	5.3		
48	CL					Interbedded brown, silty CLAY and light brown to tan fine to medium sand, trace fine gravel, stiff, moist	
49	SP		10	24	2.8	Light brown, fine to medium SAND , some silt, loose, moist	
50	CL					Brown, silty CLAY , stiff, moist	
50	SP					Brown, gravelly, fine to medium SAND , some silt, medium dense, moist	
51			10	22	7.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL10

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
52						Light brown, fine to medium SAND, trace fine gravel, medium dense, moist	
53			21	24	3.9		
54						Some fine gravel, dry Gravel grades out, dense	
55			30	22	6.2		
56						Tan, medium dense	
57	SP		10	18	4.6		
58						Olive-gray and tan Tan	
59			15	24	3.3	Light orange-brown Tan	
60						Loose	
61			8	22	2.4		
62						Medium dense Light orange, clayey, fine to medium sand layer	
63			13	24	4.4		
64						Light orange-brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL10

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
65	SP		23	24	7.0	Tan, fine to medium SAND , medium dense, dry	
66	EOB					Light brown	
67						NOTES: 1. Boring completed to a depth of 66' bgs on 10/6/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/6/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 27-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL11

Date Drilled: 10/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
27			3				BACKFILL Soil previously excavated to approximately 25' bgs and backfilled Backfill material found from 25 - 29' bgs	
28								
29	SW		11	12	0.0		Light brown to brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
30							Light brown, fine to medium SAND , trace coarse sand to fine gravel, medium dense, moist	
31			13	20	0.6		Dark brown, fine to coarse sand layer from 31.5 - 31.7' bgs	
32							Light brown, trace coarse sand	
33	SP		11	21	0.2		Some coarse sand and fine gravel, trace coarse gravel	
34								
35			13	18	0.0			
36							Gravelly sand, moist	
37							Some coarse sand to fine gravel	
38								
39			13	21	2.8			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL11

Date Drilled: 10/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
40	SW						Dark brown to brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
41	SP		14	21	4.5		Light brown, fine to medium SAND , trace coarse sand to fine gravel, medium dense, moist Tan	
42	SW						Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
43			11	24	3.8		Tan, fine SAND , medium dense, moist	
44							Light brown to tan, trace medium to coarse sand and fine gravel	
45			17	24	7.1			
46	SP						Gravel grades out	
47			14	24	6.8			
48	SM						Light brown, silty SAND , trace clay, medium dense, moist	
49	CL		14	24	3.8		Brown, silty CLAY , stiff, moist	
50	SM						Brown, silty SAND , trace gravel, medium dense, moist Some coarse sand and fine to coarse gravel	
51	SW		26	21	3.7		Orange fine to coarse SAND , some fine gravel, medium dense, moist	
52	SP						Tan, fine SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL11

Date Drilled: 10/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
53			21	23	8.7		Tan, fine SAND , medium dense, moist	
54							Trace clay 54 -54.2', medium stiff	
55			8	24	3.5			
56							Loose	
57	SP		7	23	10.8			
58								
59			13	24	12.5		Orange	
60							Tan	
61			12	23	12.4		1" orange layer	
62							3" orange layer	
63			15	24	7.9			
64								
65			18	24	10.6			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL11

Date Drilled: 10/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
66	EOB						Tan fine SAND , medium dense, moist	
67							NOTES: 1. Boring completed to a depth of 66' bgs on 10/11/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/11/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 29-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for	
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
-1			5	12	1.8	Concrete	NA = Not available (PID data not recorded)
0						FILL, brown silt, little fine to coarse sand and gravel	
1			8	14	5.0	Brown, silty sand, some fine to coarse gravel, moist	
2						Concrete	
3			14	3	NA		
4						Brown, silty sand, little clay and fine to coarse gravel, moist	
5			8	16	4.6		
6							
7			3	10	0.0	Concrete and debris	
8						Tan, fine to coarse SAND , some fine to coarse gravel, trace silt, very loose, dry	
9	SW		17	18	1.7	Medium dense	
10							
11	SP		14	17	0.0	Tan, medium to coarse SAND and fine gravel, some coarse gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (In per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
12	SW	[Symbol]				Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist Brown	
13			12	11	2.1	Tan, fine to medium SAND , little coarse sand and fine gravel, medium dense, moist	
14	SP	[Symbol]					
15			19	24	2.2		
16						Tan, fine to coarse SAND and fine gravel, some coarse gravel, medium dense, moist Some fine to coarse gravel, trace silt	
17			13	24	3.1		
18	SW	[Symbol]				Some fine gravel, little coarse gravel	
19			16	24	8.4		
20						Little fine to coarse gravel	
21	SP	[Symbol]	12	24	0.0	Brown, medium to coarse SAND , some fine sand, moist	
22	SW	[Symbol]				Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
23	GP	[Symbol]	11	22	0.0	Tan, fine to coarse SAND and fine GRAVEL , little coarse gravel	
24							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
25	SP		11	17	1.7	Tan, fine to medium SAND , little coarse sand and fine gravel, medium dense, moist	
	SM					Brown, silty SAND , some fine to coarse gravel, moist	
26	SW					Tan, fine to coarse SAND , little fine gravel, moist	
27	SP		15	24	2.3	Tan, fine to medium, silty SAND , some coarse sand, little fine gravel, trace coarse gravel, medium dense, moist	
28						Little coarse sand and fine gravel, coarse gravel grades out	
29			17	11	3.5	Brown, little fine to coarse gravel	
30						Tan, fine to coarse SAND and fine gravel, little coarse gravel, medium dense, moist	
31	SW		18	24	0.1		
32						Some fine gravel, little coarse gravel	
33			21	24	0.0		
34						Tan with brown laminations, fine SAND , medium dense, moist	
35	SP		25	19	3.6	Fine to medium sand, little coarse gravel, laminations grade out	
36	SW					Tan, fine to coarse SAND , little fine to coarse gravel, medium dense, moist	
37			20	24	1.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
38	SW					Tan, fine to coarse SAND , little fine to coarse gravel, medium dense, moist And fine gravel, coarse gravel grades out	
39	SP SW		22	24	0.0	Brown, medium to coarse SAND and fine gravel, some coarse gravel Tan, fine to coarse SAND , little fine gravel, moist	
40						Brown, medium to coarse SAND and fine gravel	
41			22	24	1.2	Tan, fine to medium sand, some coarse sand, little coarse gravel, moist	
42							
43	SW		22	24	1.7	Tan, fine to coarse SAND , little fine to coarse gravel, medium dense, moist	
44						Brown, medium to coarse SAND , moist	
45	SP		18	20	1.1	Tan, fine to medium sand, little coarse sand, trace silt, medium dense, moist	
46							
47	ML		13	24	3.4	Brown SILT , medium dense Interbedded clayey silt and tan, fine sand	
48	SP					Tan, fine SAND , moist, medium dense	
49	ML		15	24	4.3	Tan to brown, sandy SILT , grading to clayey by 49', medium dense, moist	
50	ML SP					Tan, fine SAND , moist, 1" brown, clayey silt at 49.5'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
51	SP		10	24	1.8	Tan, fine SAND , loose, moist	
52	CL					Brown, silty CLAY , stiff, moist	
53	SW		29	24	0.7	Brown, fine to coarse SAND and fine to coarse gravel, medium dense	
54						Tan, fine SAND , trace silt, medium dense, moist Dense	
55			38	24	2.0		
56						Medium dense	
57			25	24	0.0		
58	SP SM					White, silt grades out, medium dense 2" orange, silty sand at 58.3'	
59			19	24	0.0		
60							
61	SM SM		27	24	0.0	1/3" orange silty sand seam at 61.2'	
62						1/3" orange silty sand seam at 61.5' Trace silt	
63			18	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H18 - DL01

Date Drilled: 1/26/05

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Jessica Ross



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
64	SP SM		21	22	0.0	White, fine SAND, trace silt, medium dense, moist	
65						2" orange, silty sand at 64.7'	
66	EOB						
67						NOTES: 1. Boring completed to 66' below reference on 1/27/05 2. Groundwater not encountered 3. Boring backfilled with clean soil on 1/27/05 4. Analytical samples from +1-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs and nickel and off Site for beryllium	
68							
69							
70							
71							
72							
73							
74							
75							
76							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
25						BACKFILL Soil previously excavated to 28' bgs and backfilled	
26						Light brown, fine to medium sand, trace fine gravel, moist	
27							
28							
29	SW		9	24	6.4	Brown, fine to coarse SAND , some gravel, loose, moist	
30							
31			9	24	6.8		
32							
33			10	24	6.0	Light brown, fine to medium SAND , some fine gravel, medium dense, moist	
34	SP					Tan to light brown, trace fine gravel	
35			10	24	5.5		
36							
37			12	24	7.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
38	SP	[stippled pattern]				Tan to light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
39	SW	[stippled pattern]	12	24	4.5	Brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
40						Dark brown discoloration	
41	SP	[stippled pattern]	12	24	8.5	Brown, fine to medium SAND , some fine gravel, medium dense, moist	
42							
43	SW	[stippled pattern]	15	24	5.8	Brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
44							
45	SP	[stippled pattern]	14	24	3.5	Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
46	SW	[stippled pattern]				Brown, fine to coarse SAND , some fine gravel, medium dense, dry	
47	SP	[stippled pattern]	14	24	1.6	Light brown, fine to medium SAND , medium dense, moist	
47	SC	[diagonal hatching]				Brown to light brown, clayey fine SAND , medium dense, moist	
48	SP	[stippled pattern]				Light brown to tan, fine to medium SAND , medium dense, moist	
49	SM	[vertical line pattern]	14	24	7.5	Interbedded brown, silty fine SAND with clay lenses and tan to light brown, fine to medium sand, medium dense, moist	
50							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
51	SP		21	24	2.4	Brown, fine to medium SAND , some silt, medium dense, moist		
	CL					Brown, silty CLAY , very stiff, moist		
52	SW		30	24	3.9	Brown, fine to coarse SAND , some fine gravel and silt, medium dense, moist		
	CL					Light brown, silty CLAY , very stiff, moist		
53	SW		30	24	3.9	Light brown, fine to coarse SAND , some fine gravel, dense, moist		
	CL					Light brown, silty CLAY , very stiff, moist		
54	SP		33	20	5.5	Tan, fine to medium SAND , dense, moist		
55						Medium dense		
56								
57						13	16	3.8
58						Medium dense, light brown layer from 60-60.2'		
59							20	24
60						15	20	2.8
61								
62	21	24	5.8					
63								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
64	SP					Tan, fine to medium SAND , medium dense, moist Orange-brown layer from 63.7-63.8'	
65			30	24	5.2		
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 66' bgs on 9/24/04 Groundwater not encountered Boring backfilled to grade with clean sand on 9/28/04 Analytical samples collected from 28-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel 	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL04

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
21						BACKFILL Soil previously excavated to 27' bgs and backfilled	
22							
23			4	24			
24							
25			3	24			
26							
27			8	24	0.0	Brown, fine to medium SAND , trace fine gravel and cobbles, loose, moist	
28						Light brown, some fine gravel, medium dense	
29			15	22	2.8		
30	SP					Brown	
31			24	20	0.4		
32							
33	SW		15	22	1.6	Brown, fine to coarse SAND , some fine gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL04

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
34	SW					Brown, fine to coarse SAND , some fine gravel, medium dense, moist	
35			15	24	3.7	Brown, fine to medium SAND , some fine gravel, trace cobbles, medium dense, moist	
36	SP						
37			9	23	4.7		
38						Dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
39	SW		18	24	3.8		
40						Dark brown to brown, fine to medium SAND , some fine gravel, medium dense, moist	
41			15	22	5.9		
42						Light brown, trace silt at 43.8'	
43			14	22	5.1		
44	SP					Trace fine gravel	
45			22	24	4.2		
46							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL04

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
47	SP		14	24	4.4	Brown, fine to medium SAND , trace fine gravel, medium dense, moist	
	GL					Brown, clay lens at 47'	
48	SP						
49	CL		14	24	2.8	Brown, silty CLAY , stiff, moist	
50	SP					Brown, fine to medium SAND , medium dense, moist	
51	CL		21	24	1.8	Brown, CLAY , very stiff, moist	
52						Brown, silty, fine to medium SAND , trace fine gravel, medium dense, moist	
						Some fine gravel	
53			26	24	4.1		
54						Light brown, trace fine gravel and cobbles	
55	SP		30	24	4.9		
56						Tan, gravel and cobbles grade out, medium dense	
57			18	24	4.3		
58							
59			21	24	6.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL04

Date Drilled: 10/6/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
60						Tan, fine to medium SAND, medium dense, moist	
61			15	24	4.8		
62	SP						
63			15	24	3.7		
64							
65			28	24	8.6		
66	EOB					NOTES: 1. Boring completed to a depth of 66' bgs on 10/7/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 10/7/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 27-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
67							
68							
69							
70							
71							
72							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL05

Date Drilled: 9/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
26							BACKFILL Soil previously excavated to 25.3' bgs and backfilled	
27	SP		6	12	0.0		Light brown, fine to medium sand, backfill material	
28							Light brown, fine to medium SAND , trace fine gravel, loose, moist	
29	SW		11	24	0.0		Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
30							Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
31			14	24	0.0		Dark brown mottling	
32							Brown, some fine gravel	
33	SP		11	24	0.0			
34								
35			10	24	2.9			
36							Dark brown	
37			12	24	0.0		Black discoloration	
38								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL05

Date Drilled: 9/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
39			11	24	3.3		Brown, fine to medium SAND , fine gravel, medium dense, moist Brown, black banding at 38.5' and 39'	
40							Orange brown	
41			11	24	4.2			
42							Light brown, trace fine gravel	
43			11	24	8.0			
44	SP							
45			17	24	8.7			
46								
47			12	24	4.9			
48							Intermittent clay seams	
49	CL		14	24	14.4		Light brown, silty CLAY , trace fine gravel, stiff, moist	
50	SP						Brown, fine to medium SAND , trace clay lenses, some fine gravel, medium dense, moist	
51			29	24	4.6			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL05

Date Drilled: 9/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks		
52	SP						Brown, fine to medium SAND , trace clay lenses, some fine gravel, medium dense, moist			
								Light brown, trace gravel, dense		
53			30	24	9.4					
54									Tan, trace fine gravel, dense	
55			30	24	9.9					
56									Medium dense	
57			15	24	3.8					
58										
59			20	22	8.5					
60										
61	13	22	7.4							
62										
63	18	24	14.3							
64										

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL05

Date Drilled: 9/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
65	SP		32	24	0.0		Tan, fine to medium SAND , trace fine gravel, dense, moist	
66	EOB						NOTES: 1. Boring completed to a depth of 66' bgs on 9/27/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/30/04 4. Analytical samples: a. On-Site radiological samples at every foot and nickel samples collected every odd-numbered foot from 27-63' bgs b. SP sample at 64' bgs, analyzed on and off Site for	
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI; Hicksville; NY

Log of Boring: H21 - DL06

Date Drilled: 10/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
27			5	24		BACKFILL Soil previously excavated to 28' bgs and backfilled	
28							
29			13	24	0.0	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
30							
31	SW		10	24	0.0	Brown to dark brown, trace cobbles, medium dense	
32							
33			11	24	0.0		
34							
35			13	24	1.9	Brown to dark brown, fine to medium SAND , trace fine gravel, medium dense, moist	
36	SP						
37			12	24	1.3	2" dark brown to black layer	
38							
39			14	24	1.5	Brown, some fine gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL06

Date Drilled: 10/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
40						Brown, fine to medium SAND, some fine gravel, medium dense, moist	
41			11	24	0.0	Dark brown, trace fine gravel	
42							
43	SP		13	21	1.4		
44						Light brown, medium dense	
45			20	23	2.5		
46							
47			9	23	1.6		
48						Brown, gravel grades out	
49	CL		15	24	2.6	Clay lens at 48.6'	
	CL					Clay lens at 48.9'	
50	CL					Clay lens at 49.9'	
51		21	24	2.6	Some silt, trace fine gravel		
52							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOST, Hicksville, NY

Log of Boring: H21 - DL06

Date Drilled: 10/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
53			45	22	2.9	Light brown, fine to medium SAND, trace fine gravel, dense, moist	
54						Gravel grades out	
55			30	22	3.0		
56						Tan, loose	
57	SP		9	24	3.4		
58						Medium dense	
59			22	24	1.8		
60							
61			18	24	1.6		
62							
63			20	24	1.3		
64							
65			30	24	2.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL06

Date Drilled: 10/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
66	SP					Tan, fine to medium SAND, medium dense, moist		
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 66' bgs on 10/8/04 Groundwater not encountered Boring backfilled to grade with clean soil on 10/8/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot and nickel samples collected every odd-numbered feet from 28-63' bgs SP sample at 64' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel 		
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL07

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
26						BACKFILL Soil previously excavated to 30' and backfilled	NA = Not available (PID data not recorded)
27			13	24	NA		
28							
29			7	16	NA		
30							
31			20	24	0.0	Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
32	SW					1" dark brown seam Occasional fine gravel	
33			22	22	0.0	4" tan, fine to medium sand, trace coarse sand layer	
34							
35	SP		26	24	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
36	SW					Light brown, fine to coarse SAND , trace fine gravel and cobbles at 35', medium dense, moist	
37	SP		30	17	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
38							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL07

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
39	SP		19	23	0.0	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist 4" dark brown, medium to coarse sand with fine gravel layer	
40	SW					Light brown, fine to coarse SAND , trace fine to coarse gravel, moist	
41	SP		19	19	1.9	Tan, fine SAND , some medium to coarse sand, medium dense, moist Trace fine gravel	
42	SW					Tan with orange-red, fine to coarse SAND with fine gravel, moist	
42	SP					Tan, fine SAND , some medium to coarse sand, trace silt, medium dense, moist	
43	SM		21	24	1.4	Light brown, silty fine SAND , medium dense, moist	
44	SP					Tan, fine SAND , trace medium to coarse sand, medium dense, moist Red-orange seam Dark brown seam	
45			22	19	1.2		
46	ML					Brown, SILT , medium dense, moist	
47	SW		37	20	1.6	Tan with trace red, fine SAND , dense, moist	
48	SM					Brown, silty fine to coarse SAND , dense, moist 1" silt layer	
49	SP		58	18	4.2	Tan, fine SAND , very dense, moist	
50						Orange sandy silt layer Dense	
51			33	19	6.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Delineation Drilling Program
Client: GTEOSI; Hicksville, NY
Log of Boring: H21 - DL07
Date Drilled: 12/9/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
52	SP					Tan, fine SAND, dense, moist	
53	SM		12	24	4.9	Dark orange, silty SAND, medium dense, moist	
54						Tan, fine SAND, dense, moist	
55			32	20	4.2	1" orange to dark orange silty sand layer 1" orange to dark orange silty sand layer	
56							
57			51	22	4.3	1" orange silty sand layer, very dense	
58						Dense	
59	SP		30	19	4.0		
60						Loose	
61			9	20	5.0		
62							
63			6	22	5.0		
64							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL07

Date Drilled: 12/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks	
65	SP		9		4.6	Tan, fine SAND, loose, moist		
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to 66' bgs on 12/10/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/10/04 4. Analytical samples collected from 30-63': <ol style="list-style-type: none"> a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel 		
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL08

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
21						BACKFILL Soil previously excavated to 24' bgs and backfilled	
22							
23							
24						Backfill material, no samples collected	
25			19	8	0.0	Tan, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
26						Dense	
27	SP		39	18	0.0		
28						Medium dense	
29			26	22	0.0	Tan to light brown	
30							
31	SW		26	22	0.0	Tan, fine to coarse SAND , some fine gravel, medium dense, moist	
32							
33			28	22	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL08

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
34						Brown to dark brown, fine to medium SAND, some fine gravel, medium dense, moist Dense	
35	SP		30	18	0.0		
36						Dark brown, trace cobbles, gravel grades out Medium dense	
37			15	20	0.0		
38						Light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, moist	
39			18	NA	0.0		NA = Not available (Recovery not recorded)
40							
41	SW		28	20	0.0	Light brown	
42						Tan to light brown, little fine gravel	
43			16	18	0.0		
44						1" reddish brown lens	
45			14	18	0.0		
46	SM					Light brown, silty SAND, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL08

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	P/D Sample Screen (ppm)	Description	Remarks
47	SP		18	20	0.0	Tan, fine to medium SAND, medium dense, moist	
	ML					Brown, clayey SILT, medium dense, moist	
	SP					Tan, fine to medium SAND, trace gravel, medium dense, moist	
48	CL					Brown, silty CLAY, very stiff, moist Hard	
49	SW		41	24	0.0	Brown, fine to coarse SAND, some fine to coarse gravel, dense, moist	
50						Tan to light brown, fine to medium SAND, trace fine gravel, dense, moist	
51			56	20	0.0	Some coarse gravel, very dense	
52						Tan, trace fine gravel Gravel grades out, dense	
53			43	20	0.0		
54	SP					Medium dense	
55			25	20	0.0		
56							
57			26	22	0.0		
58							
59			28	24	0.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Delineation Drilling Program

Client: GTECSI, Hicksville, NY

Log of Boring: H21 - DL08

Date Drilled: 12/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
60						Tan, fine to medium SAND, medium dense, moist	
61			32	20	2.2	Dense	
62	SP					1" reddish brown, sandy silt lens, dense Medium dense	
63			27	20	2.6	1" reddish brown, sandy silt lens, medium dense	
64							
65			29	20	1.9		
66	EOB						
67						NOTES: 1. Boring completed to 66' bgs on 12/9/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 12/9/04 4. Analytical samples collected from 25-63': a. On-Site radiological every foot b. On-Site nickel every odd-numbered foot 5. SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel	
68							
69							
70							
71							
72							

**SYSTEMATIC SUBSURFACE SOIL SAMPLING AND
ANALYSIS REPORT**

**INVESTIGATION BENEATH THE 140 BUILDING
(SURVEY UNIT 06 AND SURVEY UNIT 07)**

**FORMER SYLVANIA ELECTRIC PRODUCTS
INCORPORATED FACILITY**

HICKSVILLE, NEW YORK

SITE NUMBER V 00089-1

*Prepared by
URS Corporation
and
Envirocon, Inc.*

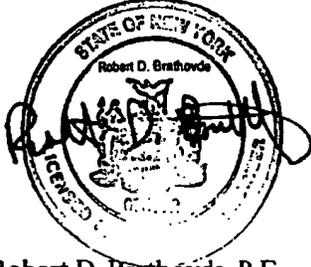
For:

**GTE Operations Support Incorporated
600 Hidden Ridge Drive
Irving, Texas 75038**

November 2005

This Investigation Beneath the 140 Building (Survey Unit 06 and Survey Unit 07) Report has been reviewed by URS Corporation – New York, and I am in agreement with the conclusions.

URS Corporation – New York



Robert D. Brathovde, P.E.
Engineer of Record

This Investigation Beneath the 140 Building (Survey Unit 06 and Survey Unit 07) Report has been reviewed by Professional Radiation Consulting, Inc. (PRCI), and I am in agreement with the conclusions.

Professional Radiation Consulting, Inc.

A handwritten signature in black ink, appearing to read "Shane Brightwell".

Shane Brightwell, CHP
President

This Investigation Beneath the 140 Building (Survey Unit 06 and Survey Unit 07) Report has been reviewed by Envirocon, Inc. and I am in agreement with the conclusions.

Envirocon, Inc.

A handwritten signature in black ink, appearing to read "Richard Hafner".

Richard Hafner
Radiation Safety Officer

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SCREENING AND SAMPLING.....	1
2.1	RADIONUCLIDES	2
2.2	VOLATILE ORGANIC COMPOUNDS	2
2.3	METALS.....	2
2.4	SAMPLING SUMMARY	2
3.0	ANALYTICAL RESULTS/ASSESSMENTS.....	3
3.1	RADIOLOGICAL	3
3.1.1	Survey Unit Assessment	3
3.1.1.1	SU06 Assessment.....	4
3.1.1.2	SU07 Assessment.....	4
3.1.2	Decision Analysis.....	4
	Max	4
3.2	VOLATILE ORGANIC COMPOUNDS	5
3.3	METALS.....	5
4.0	ADDITIONAL INVESTIGATIONS.....	6
4.1	LPH20	6
4.2	LPH21	6
4.3	LPH34	6
5.0	CONCLUSIONS.....	6

Tables

- Table 1: SU06 and SU07 Soil Boring Sample Results
Table 2: SU06 and SU07 Soil Boring Sample Results, Severn Trent Laboratories, Inc.
Table 3: LPH Soil Boring Sample Results

Figures

- Figure 1: SU06 and SU07 Systematic Sampling Locations
Figure 2: Intervals, Increments and Analyses for Samples
Figure 3: LPH Soil Boring Locations

Appendices

- Appendix A: Systematic Subsurface Soil Sampling and Analysis Plan, Beneath the 140 Building, November 2004
Appendix B: Correspondence regarding the Systematic Subsurface Soil Sampling and Analysis Plan, Beneath the 140 Building, November 2004
Appendix C: Boring Logs (Boring Logs are included as Appendix C on the enclosed CD. The enclosed CD includes a complete electronic copy of this report.)
Appendix D: MARSSIM and *COMPASS Software* Evaluations

1.0 INTRODUCTION

This report provides the results, data assessments and conclusions made with respect to the characterization of surface and subsurface soils pursuant to the *Systematic Subsurface Soil Sampling and Analysis Plan, Beneath the 140 Building* (SSSA Plan), dated November 2004 (**Appendix A**) at the Former Sylvania Electric Products Incorporated (Sylvania) facility located at 140, 100 and 70 Cantiague Rock Road, Hicksville, New York (the Site). The New York State Department of Environmental Conservation (NYSDEC) provided comments on the SSSA Plan in a letter dated December 20, 2004. GTE Operations Support Incorporated (GTEOSI) responded to the NYSDEC comments in a letter dated January 20, 2005. The SSSA Plan was approved by NYSDEC in a letter dated January 31, 2005. These letters are included in **Appendix B**.

The areas investigated were designated as Survey Units (SUs) as defined in NUREG 1575, *Multi-Agency Radiation Survey and Site Investigation Manual* (the MARSSIM). The areas designated as SU06 and SU07 are located respectively under the eastern and western portions of the 140 Building (**Figure 1**). This investigation commenced on February 22, 2005 and sampling was completed on April 14, 2005.

Included in this report are sample analytical results, data assessments and conclusions regarding radiological, volatile organic compounds (VOCs) and nickel (Ni) data. Also reported herein are the analytical results for beryllium (Be).

2.0 SCREENING AND SAMPLING

A systematic triangular sampling pattern was used to provide uniform lateral coverage of the SUs. Soil borings were advanced and soil samples were collected continuously, beginning at ground surface (just below the bottom of the concrete slab) to 30 feet below ground surface (bgs). The sampling pattern grid, rows and boring locations are shown in **Figure 1**.

A 2-foot (ft) long split spoon sampling device was advanced for soil retrieval. The recovered soils were screened using a photoionization detector (PID) for VOCs and a 3-inch sodium iodide (NaI) detector for radioactivity prior to sample collection.

The samples designated as sample point (SP) samples were collected at intervals that were vertically staggered by 1 meter (m) (approximately 3 ft). SP samples were collected in 2-ft increments to maximize sample volume. This additional volume of soil was needed to perform both on-Site and off-Site analyses. Row 1 borings had SP samples at 1 ft, 11 ft and 21 ft; Row 2 borings had SP samples at 4 ft, 14 ft and 24 ft; and Row 3 borings had SP samples at 7 ft, 17 ft and 27 ft. In addition, each boring had an SP sample at 30 ft (**Figure 2**).

Samples designated as delineation (DL) samples were collected in 1-ft increments between the staggered SP sample intervals.

Samples were analyzed both on Site for timely response to guide investigation and off Site at Severn Trent Laboratories, Inc. (STL) of Earth City, Missouri for final verification. The sample analytical results were compared to the Site cleanup levels specified in the approved *Comprehensive Soil Remediation Program Work Plan, Former Sylvania Electric Products*

Facility, January 18, 2002 (Revision 5: June 2003) (Work Plan). Intervals, increments and analyses for each row type are summarized on **Figure 2**.

A field geologist classified the soils in general accordance with the Unified Soil Classification System (USCS). Sample descriptions included soil type, color, moisture, and visual observations. Boring Logs are provided in **Appendix C**.

2.1 RADIONUCLIDES

DL samples were homogenized and analyzed on Site by gamma spectroscopy for thorium (Th-232) and uranium (U-238).

SP samples were homogenized and split. One portion was analyzed on Site by gamma spectroscopy and the other portion was sent off Site to STL for alpha spectroscopy analysis. STL performed isotopic thorium analysis using National Academy of Science (NAS)/Department of Energy (DOE) 3004/RP-725 and isotopic uranium analysis using NAS/DOE 3050/RP-725 (which includes U-234).

2.2 VOLATILE ORGANIC COMPOUNDS

DL samples were collected and analyzed for VOCs if PID readings were greater than 25 parts per million (ppm) or if visual observations (e.g., staining) warranted. DL samples to be analyzed on Site by Stone Environmental Inc. (SEI) for trichloroethene (TCE) and tetrachloroethene (PCE) using solid phase microextraction and capillary gas chromatography. Based on field screening results as noted in the boring logs (**Appendix C**), no DL samples were identified for analysis on Site.

Two samples were collected at each SP interval for VOC analysis. One sample was analyzed on Site by SEI. The other sample was sent off Site to STL for VOC analysis using United States Environmental Protection Agency (USEPA) Method 8260B.

2.3 METALS

DL samples were collected for Ni analysis at alternating 1-ft intervals between SP samples. If sample recovery was insufficient, analysis could not be performed. In such an event, a sample for Ni was collected at the next available interval and at alternate intervals thereafter. Ni DL samples were analyzed on Site using x-ray fluorescence spectroscopy (XRF) by SEI.

Two samples were collected at each SP interval for metals analysis. One sample was analyzed on Site by SEI for Ni. The other sample was sent off Site to STL for analysis of Ni and Be using USEPA Method 6010B.

2.4 SAMPLING SUMMARY

The SSSA Plan was designed to allow flexibility to respond to field conditions (e.g., boring relocation and insufficient sample recovery). Nineteen soil borings had to be moved from their proposed locations due to limited access (e.g., utilities and obstructions). The relocations were

within the limits specified in the SSSA Plan. These obstructions, each designated as an “interference area” in **Figure 1**, consisted of areas inaccessible to large equipment. Each soil boring location was surveyed using the laser positioning system (LPS).

In SU06 a total of 15 soil borings were advanced resulting in the recovery of 60 SP samples, 312 radionuclide DL samples, and 173 Ni DL samples. In SU07 a total of 22 soil borings were advanced resulting in the recovery of 88 SP samples, 478 radionuclide DL samples, and 260 Ni DL samples.

3.0 ANALYTICAL RESULTS/ASSESSMENTS

The results of the DL and SP sample analyses from SU06 and SU07 are summarized in **Table 1**. The results of the SP sample analyses from SU06 and SU07 are summarized in **Table 2**. Statistical assessments of radiological off-Site SP data were performed with applicable methods specified in the MARSSIM and analytical results were also compared to Site cleanup levels. VOC and Ni results were compared to the Site cleanup levels. Be results were compared to the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 values and other published literature sources for New York State soils. These assessments are described herein.

3.1 RADIOLOGICAL

A statistical assessment of radiological SP data (with the exception of samples from the final depth) was performed using the MARSSIM methods. SP samples at the final depth (30 ft) were compared to the Site cleanup levels in the Work Plan (**Table 2**).

3.1.1 Survey Unit Assessment

Each SU was characterized vertically at 3-m (10-ft) staggered depths. Since the MARSSIM provides characterization and final verification guidance primarily on surface soils, each 3-m (10-ft) SU interval was evaluated independently as if that SU interval were representative of an undulating soil surface. For the purposes of the assessment, the 0- to 3-m (0- to 10-ft) SU interval was labeled SU Interval 1, the 3- to 6-m (11- to 20-ft) was SU Interval 2, and the 6- to 9-m (21- to 30-ft) was SU Interval 3. Thus, for the 15 borings advanced in SU06, 45 samples were used in the MARSSIM assessment of the three SU intervals. For the 22 borings advanced in SU07, 66 samples were used in the MARSSIM assessment of the three SU intervals.

The assessment of the SU interval data sets was performed using the *Compass Software*. The *Compass Software* allows the user to set up the analytical data for all radiological analytes in a readable input file format, and then evaluate the data set using the applicable MARSSIM methods. The *Compass Software* evaluations of each of the three SU intervals are in **Appendix D**.

The Work Plan specifies Site cleanup levels for three radionuclides (Th-232, U-234 and U-238). The MARSSIM addresses evaluation of multiple radionuclides by employing the Sum of Ratios (SOR) Method. First, for SP samples, the ratio of the concentration for each radionuclide to its corresponding Site cleanup level is calculated. The ratios for all three radionuclides are then

summed for a single sample. This results in a single unitless SOR value for each sample. The samples in a given SU interval are then evaluated using the statistical methods inherent in the *Compass Software*.

3.1.1.1 SU06 Assessment

Evaluation of the DL and SP samples in SU06 indicates that the concentrations are below the radionuclide Site cleanup levels. While most samples exhibited natural prevalence of uranium, samples at soil boring 007, at depths of 17, 27 and 30 ft bgs, indicated concentrations of U-234 greater than concentrations of U-238. SU06, soil boring 007 is in the same subcell (I06) as Historic Leach Pool (LPH) 21 (**Figure 3**). LPH21 is discussed in greater detail in Section 4.0 of this report.

3.1.1.2 SU07 Assessment

Evaluation of the DL and SP samples in SU07 indicates that the concentrations are below the radionuclide Site cleanup levels. There is an indication in three soil borings (014, 031 and 032) immediately below the bottom of the concrete slab that disturbed material (fill) contains U-238 (25 to 33 picoCuries per gram [pCi/g]). Borings 007, 017 and 035 indicated concentrations of U-234 greater than concentrations of U-238 just beneath the bottom of the concrete slab.

3.1.2 Decision Analysis

The decision analysis for the radiological analytical results was based on the default null hypothesis recommended in the MARSSIM, which states: "The residual radioactivity in the survey unit exceeds the release criterion." The MARSSIM "Sign Test" (assuming no contribution from background radionuclides) was used to reject the null hypothesis. When the null hypothesis is rejected, the SU passes and qualifies for release. If the null hypothesis cannot be rejected, further investigation or remedial action may be necessary.

As stated earlier, each of the three intervals was evaluated independently in each SU. Therefore, there were a total of six independent evaluations. The following table summarizes the results of the *Compass Software* evaluations.

SU	SU Interval	Depth Range (ft)	# Samples (N)		Sum of Ratios		Null Hypothesis	SU Interval Status
			Required	Actual	Avg	Max		
06	1	0-10	13	15	0.31	0.62	Rejected	Passes
	2	11-20	13	15	0.13	0.80	Rejected	Passes
	3	21-30	14	15	0.14	0.97	Rejected	Passes
07	1	0-10	15	22	0.40	1.22	Rejected	Passes
	2	11-20	13	22	0.10	0.29	Rejected	Passes
	3	21-30	13	22	0.07	0.13	Rejected	Passes

The evaluation of the SP analytical results for SU06 and SU07 using the *Compass Software* indicated that the average concentrations of Th-232, U-234, and U-238 in the soils beneath the 140 Building are below the Site cleanup levels.

3.2 VOLATILE ORGANIC COMPOUNDS

The VOC analytical results of TCE and PCE were compared to the Site cleanup levels of 0.7 milligrams per kilogram (mg/kg) and 1.82 mg/kg, respectively. The following table provides the highest concentrations of VOC sample analytical results from Table 1.

SU	Depth Range (ft)	TCE (mg/kg)	PCE (mg/kg)
06	0-10	0.0078	0.030
	11-20	0.0026 U	0.0026 U
	21-30	0.0026 U	0.0026 U
07	0-10	0.0016 J	0.022
	11-20	0.0026 U	0.0026 U
	21-30	0.0026 U	0.0026 U

Notes: U – not detected J – estimated value

Based on a review of DL and SP analytical data, TCE and PCE were not detected above Site cleanup levels.

3.3 METALS

The Ni analytical results were compared to the Site cleanup level (560 mg/kg) while the Be results were compared to NYSDEC TAGM #4046 values (0.16 mg/kg or Site background) and other published literature sources for New York State soils. The following table provides the highest concentrations of Ni and Be from Table 1.

SU	Depth Range (ft)	Ni (mg/kg)	Be (mg/kg)
06	0-10	330	0.91
	11-20	3.1J	0.21J
	21-30	3.5J	0.38J
07	0-10	82.8J	1.2J
	11-20	42.3J	0.63
	21-30	4.6	0.31J

Based on a review of DL and SP analytical data, Ni was not detected above the Site cleanup level. Several samples had concentrations of Be above the TAGM value of 0.16 mg/kg. However, Be concentrations in New York soils are reported to range between 0 to 7 mg/kg^{1, 2}. The Be soil results are interpreted to be within the anticipated range in soils for New York State.

¹ Schacklette, H.T., and J.G. Boerngen. 1984. *Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States*. US Geological Survey. Pub. 1270.

² Dragun, J. and A. Chiasson. 1991. *Elements in North American Soils*. Hazardous Materials Control Resources Institute. Greenbelt, Maryland.

4.0 ADDITIONAL INVESTIGATIONS

In addition to the systematic characterization of soils beneath the 140 Building, an investigation of the soils was implemented concurrently to identify and delineate contaminants associated with the LPHs. That investigation was implemented in accordance with the *Systematic Subsurface Soil Sampling and Analysis Plan Historic Leach Pools, September 2004, Revision 1: October 2004* (LPH Plan). The purpose of the LPH investigation was to identify and delineate contaminants, if any, associated with suspected LPHs.

There were 14 LPHs investigated under the LPH Plan, 3 of which were located beneath the 140 Building, 2 in SU06 (LPH20 and LPH21), and 1 in SU07 (LPH34). All three LPHs are shown on **Figure 3** and the soil boring sample results are in **Table 3**.

4.1 LPH20

LPH20, soil boring 04, had contaminants above the Site cleanup level for Ni at 1 ft bgs (1,105 J mg/kg). The samples at 1 to 2 ft bgs from three soil borings (01, 03 and 05) north of soil boring 04 in LPH20 indicated Ni concentrations below the Site cleanup level.

The Ni result above the Site cleanup level indicates the presence of contaminants in shallow soils (fill) beneath the concrete slab. The Ni result in the fill does not indicate the potential presence of contaminants to undisturbed subsurface soils from LPH20.

LPH20 did not have radiological and VOC contaminants above Site cleanup levels.

4.2 LPH21

LPH21, soil boring 01, had contaminants above the Site cleanup levels for Th-232, U-234, U-238, TCE and PCE from 16 to 19 ft bgs (estimated bottom of the LPH). There were no detected contaminants above the Site cleanup levels below 20 feet bgs. LPH21, soil boring 05, had contaminants above the Site cleanup levels for U-238 at 10 ft bgs. The isotopic ratios of U-234 to U-238 (soil boring 1 at 16 and 30 ft bgs and soil borings 3 and 4 at 30 ft bgs) indicate that the radiological contaminants associated with LPH21 are from enriched uranium.

LPH21 did not have Ni contaminants above Site cleanup levels.

4.3 LPH34

LPH34 did not have contaminants above the Site cleanup levels.

5.0 CONCLUSIONS

SU06, soil boring 007, at depths of 17, 27 and 30 ft bgs, indicated concentrations of U-234 greater than concentrations of U-238. Evaluation of the samples in SU07 indicated three soil

borings (014, 031 and 032) immediately below the bottom of the concrete slab with disturbed material (fill) containing U-238 (25 to 33 pCi/g). Evaluation of the samples in SU06 and SU07 indicates that the values are below the radionuclide Site cleanup levels.

Direct comparison of the analytical results from SU06 and SU07 for VOCs and Ni to Site cleanup levels indicates that there were no contaminants above the Site cleanup levels. Several locations had Be in excess of the TAGM values but are within the reported range in soils for New York State.

Sampling conducted during the LPH investigation indicated that residual contaminants above Site cleanup levels are present at LPH20 and LPH21. The Ni result in LPH20 indicates the potential for contaminants in shallow disturbed soils (fill) at other locations beneath the concrete slab. The sample results above the Site cleanup levels at LPH21 are an indication of contaminants to soils at 10 ft bgs. In addition, the isotopic ratios of U-234 to U-238 (soil boring 1 at 16 and 30 ft bgs and soil borings 3 and 4 at 30 ft bgs) indicate that radiological contaminants are characteristic of enriched uranium. The results of the LPH investigation are detailed in the *Systematic Subsurface Sampling and Analysis Report, Historic Leach Pools*.

Based on the MARSSIM evaluation for radionuclides and the comparison of analytical results for VOCs and Ni to Site cleanup levels, the soils within the boundaries of SU06 and SU07 meet the requirements to be released for unrestricted use with the exception of areas near LPH20 and LPH21.

TABLES

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	001	28336	1.0	0.61		10.54 J			<100	
06	001	28337	2.0	0.54		3.48 J				
06	001	28338	3.0	0.22 J		1.69			<100	
06	001	28342	4.0	0.38	1.08	0.77	0.0025 U	0.0025 U	2.1 J	0.13 J
06	001	28352	6.0	0.64		0.96 J				
06	001	28353	7.0	0.49 J		2.96			<100	
06	001	28354	9.0	0.39		1.63 J			<100	
06	001	28355	10.0	0.35		1.83 J				
06	001	28356	11.0	0.40 J		2.07			<100	
06	001	28357	12.0	0.35		1.43 J				
06	001	28358	13.0	0.34		1.15 J			<100	
06	001	28359	14.0	0.191	0.187	0.223	0.0025 U	0.0025 U	2.8 J	0.14 J
06	001	28365	16.0	0.34 J		0.39				
06	001	28366	17.0	0.07		1.17 J			<100	
06	001	28367	19.0	0.17		1.10 J			<100	
06	001	28368	20.0	0.18 J		1.73				
06	001	28369	21.0	0.75		1.99 J			<100	
06	001	28370	23.0	0.22		0.85 J			<100	
06	001	28371	24.0	0.160	0.200	0.130	0.0025 U	0.0025 U	1.1 J	0.098 J
06	001	28376	26.0	0.25 J		0.88 J				
06	001	28377	27.0	0.17		0.96 J			<100	
06	001	28378	28.0	0.29		0.93 J				
06	001	28379	29.0	0.26 J		1.92			<100	
06	001	28384	30.0	0.120	0.127	0.134	0.0026 U	0.0026 U	3.1 J	0.15 J
06	002	27973	0.0	1.36		8.65			41.6 J	
06	002	27977	1.0	0.474	2.44	1.19	0.0025 U	0.0025 U	3.7 J	0.26 J
06	002	27983	3.0	0.52		1.86 J				
06	002	27984	4.0	0.64		1.62 J			<100	
06	002	27985	5.0	0.46		0.88 J				
06	002	27986	6.0	0.74		2.17			<100	
06	002	27993	7.0	0.52		0.43				
06	002	27994	8.0	0.34		1.13 J			<100	
06	002	27995	10.0	0.26		1.14			<100	
06	002	28008	11.0	0.417	0.317	0.329	0.0025 U	0.0025 U	1.7 J	0.18 J
06	002	28009	13.0	0.22		0.96 J				
06	002	28010	14.0	0.32		1.32 J			<100	
06	002	28012	15.0	0.21		1.43				
06	002	28013	16.0	0.26		1.21			<100	
06	002	28014	17.0	0.20		0.86				
06	002	28015	18.0	0.30		1.38 J			<100	
06	002	28016	20.0	0.05		1.03 J			<100	
06	002	28017	21.0	0.141	0.184	0.206	0.0026 U	0.0026 U	1.3 J	0.19 J
06	002	28023	23.0	0.25		0.53 J				
06	002	28026	24.0	0.19		0.77 J			<100	
06	002	28027	25.0	0.25		1.06 J				
06	002	28030	26.0	0.31		1.04			<100	
06	002	28031	27.0	0.21		0.51 J				
06	002	28038	28.0	NS		NS			<100	
06	002	28039	29.0	0.23		0.52 UJ				
06	002	28040	30.0	0.151	0.088 J	0.167	0.0026 U	0.0026 U	2.3 J	0.21 J
06	003	27406	0.0	NS		NS			326	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	003	27407	2.0	0.74		1.23 UJ			<100	
06	003	27415	3.0	0.78		1.66 J				
06	003	27416	4.0	0.53		1.18 J			<100	
06	003	27417	5.0	0.54		3.60 J				
06	003	27418	6.0	0.65		1.53 J			<100	
06	003	27421	7.0	1.08	0.75	0.76	0.0030 U	0.0030 U	6.7	0.50 J
06	003	27422	10.0	0.24		0.45 J			<100	
06	003	27423	11.0	0.31		0.87 J				
06	003	27424	12.0	0.28 J		0.60 J			<100	
06	003	27431	14.0	0.25		1.37			<100	
06	003	27432	15.0	0.23		0.88 J				
06	003	27433	16.0	0.26 J		0.37			<100	
06	003	27436	17.0	0.187	0.204	0.173	0.0025 U	0.0025 U	1.6 J	0.13 J
06	003	27440	20.0	0.29		0.82 J			<100	
06	003	27441	21.0	0.03		0.38				
06	003	27442	22.0	0.24 J		1.55			<100	
06	003	27450	24.0	0.24		0.55 J			<100	
06	003	27451	26.0	0.06		0.76 J			<100	
06	003	27453	27.0	0.257	0.266	0.180	0.0026 U	0.0026 U	2.9 J	0.21 J
06	003	27454	29.0	0.33 J		1.69				
06	003	27457	30.0	0.198	0.140	0.197	0.0026 U	0.0026 U	3.5 J	0.32 J
06	004	27310	0.0	1.03		2.48 J				
06	004	27311	1.0	1.45		3.75 J			<100	
06	004	27312	2.0	0.63		4.34 J				
06	004	27313	3.0	0.55		0.50 UJ			<100	
06	004	27318	4.0	0.65	0.69	0.410	0.0025 U	0.0025 U	4.8	0.31 J
06	004	27322	6.0	0.47		1.27 J				
06	004	27323	7.0	0.43		1.05 J			<100	
06	004	27324	9.0	0.05		1.05 J			<100	
06	004	27330	11.0	0.12		2.28 J			<100	
06	004	27333	12.0	0.30		1.55 J				
06	004	27334	13.0	0.05		2.49 J			<100	
06	004	27335	14.0	0.261	0.211	0.213	0.0025 U	0.0025 U	1.4 J	0.19 J
06	004	27339	16.0	0.23		1.60 J				
06	004	27340	17.0	0.26		1.64 J			<100	
06	004	27347	19.0	0.24		3.04 J			<100	
06	004	27358	20.0	0.16		0.69 J				
06	004	27359	21.0	0.30		0.65 J			<100	
06	004	27360	23.0	0.37		1.11 J			<100	
06	004	27365	24.0	0.187	0.185	0.177	0.0025 U	0.0025 U	3.3 J	0.20 J
06	004	27373	26.0	0.25		1.82 J				
06	004	27374	27.0	0.26		0.70 J			<100	
06	004	27375	28.0	0.31		1.71 J				
06	004	27376	29.0	0.04		1.33 J			<100	
06	004	27379	30.0	0.121	0.138	0.123 J	0.0025 U	0.0025 U	2.9 J	0.38 J
06	005	26850	0.0	0.96		13.10				
06	005	26851	1.0	0.83	2.37	1.87	0.0027 U	0.0024 J	6.6	0.18 J
06	005	26854	3.0	0.81 J		0.87				
06	005	26855	4.0	0.62		2.46 J			<100	
06	005	26865	5.0	0.78		2.45				
06	005	26866	6.0	1.00 J		1.64 J			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	005	26867	7.0	0.34		1.31 J				
06	005	26868	8.0	0.29 J		0.47 J			<100	
06	005	26869	9.0	0.24		0.32 UJ				
06	005	26870	10.0	0.47		1.09 J			<100	
06	005	26873	11.0	0.268	0.241	0.295	0.0025 U	0.0025 U	3.1 J	0.20 J
06	005	26874	13.0	0.37 J		1.46				
06	005	26875	14.0	0.45		1.11 J			<100	
06	005	26887	16.0	0.23		0.53 J			<100	
06	005	26888	18.0	0.22 J		1.69			<100	
06	005	26889	19.0	0.29		0.77 J				
06	005	26890	20.0	0.24		0.80 J			<100	
06	005	26899	21.0	0.235	0.220	0.227	0.0025 U	0.0025 U	1.9 J	0.17 J
06	005	26900	23.0	0.32		0.89 J				
06	005	26907	28.0	0.25 J		0.71 J			<100	
06	005	26908	29.0	0.25		1.13 J				
06	005	26909	30.0	0.183	0.154	0.222	0.0025 U	0.0025 U	3.0 J	0.25 J
06	006	28396	0.0	0.68		3.20 J				
06	006	28398	1.0	0.58	0.50	0.61	0.0025 U	0.0025 U	9.8	0.91
06	006	28403	3.0	0.42		2.07				
06	006	28404	4.0	0.83		1.53 J			<100	
06	006	28407	5.0	0.47		1.68				
06	006	28408	6.0	0.16		2.12			<100	
06	006	28409	7.0	0.50		3.45 J				
06	006	28410	8.0	0.36		0.62			<100	
06	006	28412	10.0	0.32		2.50 J			<100	
06	006	28413	11.0	0.249	0.233	0.244	0.0025 U	0.0025 U	1.3 J	0.10 J
06	006	28414	13.0	0.37		0.73				
06	006	28415	14.0	0.29		1.04 J			<100	
06	006	28416	15.0	0.19		0.41				
06	006	28417	16.0	0.05		0.63			<100	
06	006	28418	18.0	0.28		0.88 J			<100	
06	006	28419	20.0	0.24		0.42			<100	
06	006	28420	21.0	0.223	0.180	0.170	0.0025 U	0.0025 U	1.5 J	0.11 J
06	006	28421	24.0	0.33		1.18			<100	
06	006	28422	25.0	0.03		0.55 J				
06	006	28423	26.0	0.04		2.02			<100	
06	006	28424	27.0	0.21		0.38				
06	006	28425	28.0	0.30		1.92 J			<100	
06	006	28426	29.0	0.04		0.81				
06	006	28427	30.0	0.17 U	0.148	0.113	0.0025 U	0.0025 U	2.4 J	0.17 J
06	007	28086	0.0	0.54		3.90			<100	
06	007	28087	1.0	1.04		6.25				
06	007	28088	2.0	0.80		2.26 J			<100	
06	007	28098	3.0	0.34		1.00 J				
06	007	28097	4.0	0.39		1.23 J			<100	
06	007	28103	5.0	0.67		2.04 J				
06	007	28104	6.0	0.83		1.84			<100	
06	007	28107	7.0	0.42	0.42	0.380	0.00071 J	0.0025 U	1.7 J	0.15 J
06	007	28108	10.0	0.28		0.70 J			<100	
06	007	28120	11.0	0.26		1.03 J				
06	007	28121	12.0	0.32		3.65			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	007	28128	13.0	0.22		8.20				
06	007	28129	14.0	0.33		13.56			<100	
06	007	28130	15.0	0.33		16.59				
06	007	28131	16.0	0.39		17.29			<100	
06	007	28144	17.0	0.281	23.8	11.2	0.0025 U	0.0025 U	1.9 J	0.11 J
06	007	28143	19.0	0.39		15.88				
06	007	28145	20.0	0.50		17.07			<100	
06	007	28148	21.0	0.37		12.72				
06	007	28149	22.0	0.54		9.51			<100	
06	007	28157	23.0	0.30		10.10				
06	007	28158	24.0	0.26		16.02			<100	
06	007	28159	25.0	0.37		16.53				
06	007	28160	26.0	0.45		30.19			<100	
06	007	28171	27.0	0.239	29.0	15.0	0.0025 U	0.0025 U	2.8 J	0.20 J
06	007	28172	29.0	0.12		14.68				
06	007	28173	30.0	0.44	20.7	11.5	0.0025 U	0.0025 U	2.2 J	0.15 J
06	008	27868	1.0	0.64		6.14			<100	
06	008	27869	2.0	0.81		5.50				
06	008	27870	3.0	0.50		2.18			<100	
06	008	27882	4.0	0.356	1.91	0.83	0.0025 U	0.00061 J	2.8 J	0.22 J
06	008	27886	6.0	0.67		1.74 J				
06	008	27887	7.0	0.42		0.74 J			<100	
06	008	27888	9.0	0.27		0.37 J			<100	
06	008	27897	10.0	0.28		1.67				
06	008	27898	11.0	0.40		1.32 J			<100	
06	008	27899	12.0	0.30 J		0.96				
06	008	27900	13.0	0.32		0.39 J			<100	
06	008	27911	14.0	0.147	0.236	0.175	0.0025 U	0.0025 U	1.5 J	0.17 J
06	008	27915	16.0	0.26		1.42				
06	008	27916	17.0	0.25		0.99 J			<100	
06	008	27917	19.0	0.25		0.44 J			<100	
06	008	27918	21.0	0.06		2.46			<100	
06	008	27931	24.0	0.259	0.205	0.170	0.0026 U	0.0026 U	1.8 J	0.19 J
06	008	27934	26.0	0.23		0.46				
06	008	27935	27.0	0.26		0.78 J			<100	
06	008	27936	28.0	0.21		1.06				
06	008	27937	29.0	0.29		1.95 J			<100	
06	008	27938	30.0	0.139	0.108	0.183	0.0026 U	0.0026 U	1.5 J	0.17 J
06	009	27681	0.0	0.74		17.67			92.4 J	
06	009	27682	1.0	0.97	7.40	6.06	0.0028 U	0.0071	330	0.41 J
06	009	27683	3.0	0.33		2.87				
06	009	27684	4.0	0.44		0.69			<100	
06	009	27691	5.0	0.65		3.00				
06	009	27692	6.0	0.53		1.89			<100	
06	009	27693	7.0	0.91		0.94				
06	009	27694	8.0	0.27		0.77 J			<100	
06	009	27704	10.0	0.25		1.07 J			<100	
06	009	27705	11.0	0.269	0.311	0.245	0.0025 U	0.0025 U	1.8 J	0.18 J
06	009	27706	13.0	0.24		0.64 J				
06	009	27707	14.0	0.26		1.29 J			<100	
06	009	27708	15.0	0.28		1.97				

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	009	27709	16.0	0.28		0.64			<100	
06	009	27710	17.0	0.23		1.15				
06	009	27711	18.0	0.29		0.61 J			<100	
06	009	27712	19.0	0.23		0.80 J				
06	009	27713	20.0	0.24		1.02 J			<100	
06	009	27720	21.0	0.249	0.174	0.179	0.0026 U	0.0026 U	0.98 J	0.13 J
06	009	27721	23.0	0.25		1.24 J				
06	009	27732	24.0	0.26		1.24			<100	
06	009	27733	25.0	0.34		0.95 J				
06	009	27739	26.0	0.22		0.95 J			<100	
06	009	27740	27.0	0.27		1.98				
06	009	27741	28.0	NS		NS			<100	
06	009	27742	29.0	0.22		1.21				
06	009	27743	30.0	0.149	0.149	0.128	0.0025 U	0.0025 U	1.7 J	0.13 J
06	010	27583	0.0	1.20 J		5.87			<100	
06	010	27584	1.0	1.25 J		2.00				
06	010	27585	2.0	0.81 J		2.04			<100	
06	010	27586	3.0	0.60 J		0.65				
06	010	27587	4.0	0.45 J		0.60			<100	
06	010	27591	5.0	0.95 J		1.28 J				
06	010	27592	6.0	0.78 J		1.57 J			<100	
06	010	27593	7.0	0.220	0.294	0.272	0.0026 U	0.0026 U	1.4 J	0.14 J
06	010	27594	10.0	0.35 J		1.59			<100	
06	010	27596	11.0	0.04 UJ		1.14				
06	010	27597	12.0	0.38 J		0.82 J			<100	
06	010	27598	13.0	0.29 J		0.59				
06	010	27599	14.0	0.36 J		1.18 J			<100	
06	010	27607	15.0	0.26 J		0.19				
06	010	27608	16.0	0.20 J		0.40			<100	
06	010	27609	17.0	0.105	0.134	0.133	0.0026 U	0.0026 U	0.89 J	0.092 J
06	010	27610	20.0	0.23 J		1.29			<100	
06	010	27611	21.0	0.25 J		0.89 J				
06	010	27612	22.0	0.31 J		2.27			<100	
06	010	27622	23.0	0.29 J		2.32 J				
06	010	27623	24.0	0.35 J		1.08			<100	
06	010	27633	25.0	0.18		0.77 J				
06	010	27634	26.0	0.26		1.54			<100	
06	010	27635	27.0	0.181	0.159	0.127	0.0026 U	0.0026 UJ	1.3 J	0.16 J
06	010	27636	29.0	0.05		1.06 J				
06	010	27642	30.0	0.148	0.167	0.145	0.0026 U	0.0026 UJ	1.1 J	0.17 J
06	012	28202	0.0	0.95		6.96 J				
06	012	28203	1.0	0.75		2.49 J			<100	
06	012	28204	3.0	0.85 J		6.09			<100	
06	012	28205	4.0	0.79	3.19	2.33	0.0078	0.024	5.6	0.20 J
06	012	28206	6.0	0.63		1.65 J				
06	012	28207	7.0	0.90		2.35 J			<100	
06	012	28217	8.0	0.42 J		2.57				
06	012	28218	9.0	0.23		0.38 UJ			<100	
06	012	28219	10.0	0.38 J		2.89				
06	012	28220	11.0	0.30		1.31 J			<100	
06	012	28221	12.0	0.28 J		1.21 J				

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	012	28222	13.0	0.26		1.17 J			<100	
06	012	28223	14.0	0.172	0.208	0.164	0.0025 U	0.0025 U	1.8 J	0.12 J
06	012	28233	16.0	0.24		1.38 J				
06	012	28234	17.0	0.23		0.43			<100	
06	012	28235	18.0	0.20		1.38				
06	012	28236	19.0	0.27		0.48			<100	
06	012	28237	20.0	0.35		1.29				
06	012	28238	21.0	0.09		1.88 J			<100	
06	012	28256	23.0	0.18		1.24			<100	
06	012	28257	24.0	0.178	0.301	0.163	0.0025 U	0.0025 U	0.99 J	0.058 J
06	012	28264	26.0	0.33		0.86 J				
06	012	28265	27.0	0.23		1.84			<100	
06	012	28271	28.0	0.28		1.70				
06	012	28272	29.0	0.18		0.79 J			<100	
06	012	28273	30.0	0.089 J	0.185	0.117	0.0025 U	0.0025 U	1.9 J	0.12 J
06	013	28277	0.0	0.65		1.13 J				
06	013	28278	1.0	0.64	5.19	1.93	0.0077	0.030	7.6 J	0.34 J
06	013	28292	3.0	0.81		2.81 J				
06	013	28293	4.0	0.59		1.37 J			<100	
06	013	28294	5.0	0.55		2.11				
06	013	28295	6.0	0.61		1.23 J			<100	
06	013	28296	7.0	0.48		2.10				
06	013	28297	8.0	0.31		0.46 J			<100	
06	013	28298	10.0	0.35		0.38			<100	
06	013	28299	11.0	0.210	0.224	0.215	0.0025 U	0.0025 U	1.2 J	0.071 J
06	013	28301	13.0	0.27		0.38				
06	013	28302	14.0	0.31		1.45 J			<100	
06	013	28303	15.0	0.33		0.73 J				
06	013	28304	16.0	0.29		0.96 J			<100	
06	013	28307	17.0	0.15		0.60				
06	013	28308	18.0	0.06		2.18			<100	
06	013	28309	20.0	0.31		0.56			<100	
06	013	28318	21.0	0.302	0.194	0.138	0.0025 U	0.0025 U	2.8 J	0.086 J
06	013	28319	23.0	0.34		0.56 J				
06	013	28320	24.0	0.32 J		0.46			<100	
06	013	28321	25.0	0.26 J		1.45 J				
06	013	28322	26.0	0.27		2.40 J			<100	
06	013	28323	27.0	0.30		1.58 J				
06	013	28324	28.0	0.23 J		0.73 J			<100	
06	013	28325	29.0	0.45		1.84 J				
06	013	28326	30.0	0.240	0.175	0.166	0.0025 U	0.0025 U	3.2 J	0.087 J
06	014	27473	0.0	0.99 J		40.65			165	
06	014	27477	1.0	1.09		3.27				
06	014	27478	2.0	0.74		0.78			<100	
06	014	27488	3.0	0.44 J		1.68				
06	014	27489	4.0	0.76 J		2.43			<100	
06	014	27500	5.0	0.86 J		1.22 J				
06	014	27501	6.0	0.98 J		2.88			<100	
06	014	27502	7.0	0.286	0.322	0.231	0.0025 U	0.0025 U	1.3 J	0.14 J
06	014	27503	10.0	0.32 J		1.39 J			<100	
06	014	27512	11.0	0.36 J		0.58 J			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	014	27513	12.0	0.36 J		0.94 J				
06	014	27514	14.0	0.38 J		1.05 J			<100	
06	014	27521	15.0	0.40 J		0.69				
06	014	27522	16.0	0.25 J		0.41			<100	
06	014	27528	17.0	0.172	0.139	0.147	0.0025 U	0.0025 U	1.0 J	0.11 J
06	014	27529	19.0	0.17 J		0.42 J				
06	014	27530	20.0	0.24 J		1.32			<100	
06	014	27531	21.0	0.29 J		1.23				
06	014	27532	22.0	0.35 J		0.94 J			<100	
06	014	27543	23.0	0.24 J		1.06				
06	014	27544	24.0	0.32 J		0.51			<100	
06	014	27549	25.0	0.25 J		0.86 J				
06	014	27550	26.0	0.23 J		0.63 J			<100	
06	014	27555	27.0	0.168	0.156	0.167	0.0025 U	0.0025 U	1.9 J	0.24 J
06	014	27556	29.0	0.19 J		0.58				
06	014	27561	30.0	0.262	0.122	0.141	0.0026 U	0.0026 U	1.4 J	0.14 J
06	015	27763	0.0	0.80		15.24				
06	015	27764	1.0	1.03		13.74			<100	
06	015	27765	3.0	0.95		5.39			<100	
06	015	27776	4.0	1.07	4.62	4.89	0.00054 J	0.0018 J	13.1	0.49 J
06	015	27777	7.0	0.50		0.78			<100	
06	015	27778	9.0	0.28		1.24			<100	
06	015	27787	10.0	0.26		1.22 J				
06	015	27788	11.0	0.25		0.55 J			<100	
06	015	27789	12.0	0.42		1.20 J				
06	015	27790	13.0	0.31		0.87 J			<100	
06	015	27791	14.0	0.259	0.164	0.182	0.0025 U	0.0025 U	1.4 J	0.11 J
06	015	27798	16.0	0.34		0.55				
06	015	27799	17.0	0.10		1.30 J			<100	
06	015	27800	18.0	0.16		0.42				
06	015	27801	19.0	0.23		1.25 J			<100	
06	015	27802	20.0	0.25		1.09 J				
06	015	27803	21.0	0.24		1.12			<100	
06	015	27814	22.0	0.34		0.83 J				
06	015	27815	23.0	0.18		1.01 J			<100	
06	015	27816	24.0	0.167	0.131	0.140	0.0026 U	0.0026 U	2.5 J	0.19 J
06	015	27826	26.0	0.32		0.37				
06	015	27827	27.0	0.04		0.75 J			<100	
06	015	27828	28.0	0.21		0.74 J				
06	015	27829	29.0	0.06		0.65 J			<100	
06	015	27832	30.0	0.196	0.180	0.138	0.0025 U	0.0025 U	1.5 J	0.12 J
06	016	27059	0.0	0.55		2.44				
06	016	27060	1.0	0.72	5.76	5.42	0.0026 J	0.018 J	21.7	0.30 J
06	016	27061	3.0	0.37 J		1.83 J				
06	016	27062	4.0	0.37 J		1.46 J			<100	
06	016	27063	5.0	0.31 J		1.44 J				
06	016	27064	6.0	0.86		1.27 J			<100	
06	016	27065	7.0	0.41		0.39				
06	016	27066	8.0	0.30		0.52 J			<100	
06	016	27067	9.0	0.47		0.87 J				
06	016	27068	10.0	0.21		1.80			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	016	27082	11.0	0.170	0.213	0.235	0.0025 U	0.0025 U	2.3 J	0.21 J
06	016	27083	13.0	0.34		1.45				
06	016	27084	14.0	0.29		0.89 J			<100	
06	016	27085	15.0	0.27		1.22				
06	016	27086	16.0	0.33		1.42 J			<100	
06	016	27087	17.0	0.23 J		0.53 J				
06	016	27088	18.0	0.33		0.97 J			<100	
06	016	27092	19.0	0.04		0.89				
06	016	27093	20.0	0.23		1.08 J			<100	
06	016	27094	21.0	0.328	0.322	0.329	0.0025 U	0.0025 U	0.92 J	0.12 J
06	016	27095	23.0	0.32 J		0.68 J				
06	016	27109	24.0	0.23		0.33			<100	
06	016	27110	25.0	0.31		0.74 J				
06	016	27111	26.0	0.29		0.76 J			<100	
06	016	27112	27.0	0.26		0.68				
06	016	27115	28.0	0.15 J		0.32 UJ			<100	
06	016	27116	29.0	0.19 J		0.41 J				
06	016	27117	30.0	0.225	0.128	0.145	0.0026 U	0.0026 U	1.8 J	0.22 J
07	004	29453	0.0	0.79		5.00			<100	
07	004	29454	1.0	0.386	0.53	0.47	0.0026 U	0.0026 UJ	13.6	0.47 J
07	004	29455	3.0	0.42		1.77 J				
07	004	29456	4.0	0.37		1.43			<100	
07	004	29457	5.0	0.42		0.90				
07	004	29458	6.0	1.32		1.32 J			<100	
07	004	29459	7.0	0.54		2.04				
07	004	29460	8.0	0.91		1.55 J			<100	
07	004	29461	9.0	1.32		2.56 J				
07	004	29462	10.0	0.69		1.77 J			<100	
07	004	29463	11.0	0.74	0.64	0.46	0.0026 U	0.0026 UJ	9.2	0.63
07	004	29466	13.0	0.23		0.44				
07	004	29467	14.0	0.32		1.44			<100	
07	004	29468	15.0	0.31		1.85				
07	004	29469	16.0	0.23		0.86 J			<100	
07	004	29470	17.0	0.03		1.35 J				
07	004	29471	18.0	0.20		0.47			<100	
07	004	29472	19.0	0.32		0.53 J				
07	004	29473	20.0	0.31		0.66 J			<100	
07	004	29474	21.0	0.207 J	0.220	0.154	0.0026 U	0.0026 UJ	1.0 J	0.13 J
07	004	29475	23.0	0.21		0.41				
07	004	29476	24.0	0.29		0.99 J			<100	
07	004	29477	25.0	0.20		1.08				
07	004	29478	26.0	0.24		0.73 J			<100	
07	004	29479	27.0	0.19		0.98 J				
07	004	29480	28.0	0.09		1.21			<100	
07	004	29481	29.0	0.22		1.11				
07	004	29482	30.0	0.125	0.111	0.120	0.0026 U	0.0026 UJ	2.2 J	0.16 J
07	005	29291	0.0	0.40		0.40				
07	005	29297	2.0	0.88		13.89			82.8 J	
07	005	29298	6.0	1.54		1.76 J			<100	
07	005	29306	7.0	0.364	0.322	0.305	0.0025 U	0.0025 U	2.3 J	0.16 J
07	005	29307	9.0	0.47		0.69 J				

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni ⁶³ (mg/kg)	Be (mg/kg)
07	005	29308	10.0	0.48		1.71 J			<100	
07	005	29309	11.0	0.29		1.85				
07	005	29310	12.0	0.27		0.43			<100	
07	005	29313	13.0	0.30		0.54 J				
07	005	29314	14.0	0.33		1.12 J			<100	
07	005	29317	15.0	0.53 J		1.73				
07	005	29318	16.0	0.26		0.54 J			<100	
07	005	29320	17.0	0.176	0.157	0.193	0.0026 U	0.0026 U	1.8 J	0.048 J
07	005	29321	19.0	0.36 J		0.78 J				
07	005	29322	20.0	0.36 J		1.65			<100	
07	005	29327	21.0	0.38 J		0.96 J				
07	005	29328	22.0	0.25 J		2.01			<100	
07	005	29329	24.0	0.05		2.11 J			<100	
07	005	29332	25.0	0.16		1.92				
07	005	29333	26.0	0.24 J		0.30			<100	
07	005	29334	27.0	0.201	0.162	0.178	0.0026 U	0.0026 U	1.1 J	0.084 J
07	005	29340	29.0	0.05		1.78				
07	005	29341	30.0	0.141	0.225	0.182	0.0026 U	0.0026 U	2.1 J	0.23 J
07	006	29250	0.0	0.66		3.03				
07	006	29251	1.0	0.48		1.62 J			<100	
07	006	29254	2.0	1.03		1.57 J				
07	006	29255	3.0	1.01		1.94 J			<100	
07	006	29256	4.0	0.78	0.62	0.55	0.0025 U	0.0025 U	2.0 J	0.12 J
07	006	29257	6.0	0.39		1.32				
07	006	29258	7.0	0.62		1.98 J			<100	
07	006	29259	8.0	0.33		3.31 J				
07	006	29260	9.0	0.33		1.16 J			<100	
07	006	29265	10.0	0.24		0.68 J				
07	006	29266	11.0	0.22		1.74			<100	
07	006	29267	12.0	0.36		2.09 J				
07	006	29268	13.0	0.44		1.03			<100	
07	006	29269	14.0	0.248	0.296	0.271	0.0026 U	0.0026 U	2.3 J	0.084 J
07	006	29270	16.0	0.23		0.67 J				
07	006	29271	17.0	0.28		0.44 J			<100	
07	006	29273	19.0	0.22		1.43			<100	
07	006	29279	20.0	0.39		1.15				
07	006	29280	21.0	0.02		1.31			<100	
07	006	29281	22.0	0.29		0.88 J				
07	006	29282	23.0	0.27		0.63 J			<100	
07	006	29283	24.0	0.207	0.318	0.311	0.0026 U	0.0026 U	1.1 J	0.079 J
07	006	29284	26.0	0.21		0.78 J				
07	006	29285	27.0	0.24		1.23 J			<100	
07	006	29286	28.0	0.22		0.42 J				
07	006	29287	29.0	0.20		1.38			<100	
07	006	29288	30.0	0.125	0.133	0.131	0.0026 U	0.0026 U	1.7 J	0.13 J
07	007	29206	0.0	0.63		1.74 J			<100	
07	007	29209	1.0	0.73	15.3	8.8	0.0028 U	0.0028 U	19.3	0.61
07	007	29210	3.0	0.51		2.94				
07	007	29211	4.0	0.57		6.65			<100	
07	007	29214	5.0	0.32		2.60				
07	007	29215	6.0	0.35		5.94			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	007	29218	7.0	0.21		1.16				
07	007	29219	8.0	0.37		0.90 J			<100	
07	007	29220	9.0	0.25		1.33 J				
07	007	29221	10.0	0.41		1.27 J			<100	
07	007	29222	11.0	0.222	0.320	0.299	0.0026 U	0.0026 U	3.2 J	0.26 J
07	007	29223	13.0	0.27		0.52				
07	007	29224	14.0	0.31		1.21 J			<100	
07	007	29227	15.0	0.05		1.29 J				
07	007	29228	16.0	0.25		1.01			<100	
07	007	29229	17.0	0.34		1.04				
07	007	29230	18.0	NS		NS			<100	
07	007	29231	19.0	0.29		0.64				
07	007	29232	20.0	0.33		0.50			<100	
07	007	29237	21.0	0.145	0.229	0.171	0.0026 U	0.0026 U	1.2 J	0.074 J
07	007	29238	23.0	0.28		1.32				
07	007	29241	24.0	0.25		0.52 J			<100	
07	007	29242	25.0	0.19		0.72 UJ				
07	007	29243	26.0	0.15		0.38			<100	
07	007	29244	27.0	0.28		1.79 J				
07	007	29245	28.0	0.24		1.68			<100	
07	007	29246	29.0	0.34		1.17 J				
07	007	29247	30.0	0.161	0.167	0.158	0.0026 U	0.0026 U	0.98 J	0.081 J
07	012	29784	0.0	0.52		3.12			<100	
07	012	29785	2.0	0.81		6.04			<100	
07	012	29786	3.0	0.30		1.72				
07	012	29787	4.0	0.50		1.30 J			<100	
07	012	29789	5.0	0.54		2.93 J				
07	012	29790	6.0	0.87		1.21 J			<100	
07	012	29791	7.0	0.181	0.223	0.013	0.0025 U	0.0025 UJ	1.5 J	0.14 J
07	012	29794	9.0	0.43		0.65				
07	012	29795	10.0	0.76		3.68			<100	
07	012	29799	11.0	0.46		0.88 J				
07	012	29800	12.0	1.12		2.19 J			<100	
07	012	29801	13.0	0.34		0.61 J				
07	012	29802	14.0	0.31		0.51			<100	
07	012	29803	15.0	0.24		0.59 J				
07	012	29804	16.0	0.27		1.30			<100	
07	012	29814	17.0	0.121	0.153	0.107	0.0025 U	0.0025 UJ	1.1 J	0.14 J
07	012	29815	20.0	0.33		0.51			<100	
07	012	29818	21.0	0.32		1.81				
07	012	29819	22.0	0.39		1.36 J			<100	
07	012	29820	23.0	0.33		0.99 J				
07	012	29821	24.0	0.06		0.48			<100	
07	012	29822	25.0	0.33		0.36				
07	012	29823	26.0	0.20		1.18 J			<100	
07	012	29833	27.0	0.179	0.155	0.176	0.0025 U	0.0025 UJ	1.2 J	0.16 J
07	012	29834	29.0	0.25		1.70 J				
07	012	29835	30.0	0.246	0.158	0.145	0.0025 U	0.0025 UJ	4.6	0.31 J
07	013	29710	0.0	0.66		13.70				
07	013	29711	1.0	0.73		5.36			<100	
07	013	29715	2.0	0.56		6.38				

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)	Be (mg/kg)
07	013	29716	3.0	0.57		1.85			<100	
07	013	29717	4.0	0.57	3.04	2.70	0.0025 U	0.0025 UJ	3.4 J	0.21 J
07	013	29724	6.0	0.66		1.49				
07	013	29725	7.0	1.32		3.30			<100	
07	013	29726	8.0	0.95		2.64				
07	013	29727	9.0	0.47		1.25 J			<100	
07	013	29728	11.0	0.46		1.78 J			<100	
07	013	29729	12.0	0.36		1.90				
07	013	29730	13.0	0.39		0.50			<100	
07	013	29732	14.0	0.221	0.271	0.288	0.0025 U	0.0025 UJ	2.1 J	0.24 J
07	013	29733	16.0	0.35		2.06				
07	013	29734	17.0	0.29		1.16			<100	
07	013	29738	18.0	0.24		0.93 J				
07	013	29739	19.0	0.29		0.74 J			<100	
07	013	29740	20.0	0.31		0.70 J				
07	013	29741	21.0	0.27		1.48			<100	
07	013	29744	22.0	0.32		0.93 J				
07	013	29745	23.0	0.34		1.86			<100	
07	013	29746	24.0	0.215	0.209	0.165	0.0025 U	0.0025 UJ	0.70 J	0.10 J
07	013	29750	26.0	0.19		0.92				
07	013	29751	27.0	0.25		4.00			<100	
07	013	29752	28.0	0.30		1.43				
07	013	29753	29.0	0.17		0.56 J			<100	
07	013	29754	30.0	0.177	0.109	0.013	0.0025 U	0.0025 UJ	1.6 J	0.16 J
07	014	29345	0.0	0.36		1.26			<100	
07	014	29346	1.0	0.432	26.8	26.6	0.0025 U	0.0025 UJ	5.3	0.19 J
07	014	29347	3.0	1.08 J		6.21				
07	014	29348	4.0	0.44		9.37			<100	
07	014	29349	5.0	0.56 J		5.78				
07	014	29350	6.0	0.50		0.73 J			<100	
07	014	29351	7.0	0.34 J		1.57				
07	014	29352	8.0	0.09 UJ		0.68 J			<100	
07	014	29353	9.0	0.08 UJ		0.44				
07	014	29354	10.0	0.06 UJ		0.88 J			<100	
07	014	29355	11.0	0.153	0.340	0.300	0.0025 U	0.0025 UJ	2.3 J	0.11 J
07	014	29356	13.0	0.33 J		0.55				
07	014	29357	14.0	0.34 J		1.78			<100	
07	014	29358	15.0	0.23 J		0.91 J				
07	014	29359	16.0	0.22 J		0.57			<100	
07	014	29360	17.0	0.27		1.32				
07	014	29361	18.0	0.23 J		0.88 J			<100	
07	014	29362	20.0	0.22 J		1.01			<100	
07	014	29363	21.0	0.110	0.190	0.184	0.0025 U	0.0025 UJ	1.0 J	0.51 U
07	014	29364	23.0	0.38 J		0.57				
07	014	29365	24.0	0.29 J		1.59 J			<100	
07	014	29366	25.0	0.25 J		2.46 J				
07	014	29373	26.0	0.26		1.35 J			<100	
07	014	29374	27.0	0.14		0.27				
07	014	29378	28.0	NS		NS			<100	
07	014	29379	29.0	0.22		1.18 J				
07	014	29380	30.0	0.165	0.155	0.139	0.0026 U	0.0026 UJ	2.4 J	0.17 J

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	015	29111	0.0	0.49		2.83 J			<100	
07	015	29115	1.0	1.13		24.47 J				
07	015	29116	2.0	0.62		5.11 J			45.8	
07	015	29117	3.0	0.55 J		1.29 J				
07	015	29118	4.0	0.35 J		5.99 J			<100	
07	015	29121	5.0	0.39		1.60 J				
07	015	29122	6.0	0.40		3.09 J			<100	
07	015	29127	7.0	0.392	0.297	0.219	0.0025 U	0.0025 U	1.9 J	0.13 J
07	015	29130	9.0	0.28 J		1.13 J				
07	015	29131	10.0	0.02		1.09 UJ			<100	
07	015	29133	11.0	0.31		0.38 J				
07	015	29134	12.0	0.28		1.46 J			<100	
07	015	29140	13.0	0.30		0.64 J				
07	015	29141	14.0	0.25		0.76 J			<100	
07	015	29142	15.0	0.23		0.52 UJ				
07	015	29143	16.0	0.27		0.94 J			<100	
07	015	29144	17.0	0.125	0.137	0.165	0.0025 U	0.0025 U	1.0 J	0.075 J
07	015	29150	19.0	0.25		1.21 J				
07	015	29151	20.0	0.30		1.68 J			42.3 J	
07	015	29152	21.0	0.21		1.10 J				
07	015	29153	22.0	0.27		0.69 J			<100	
07	015	29156	23.0	0.25 J		1.07 J				
07	015	29157	24.0	0.29		0.79 J			<100	
07	015	29160	25.0	0.28		2.43 J				
07	015	29161	26.0	0.26 J		1.59 J			<100	
07	015	29162	27.0	0.226	0.170	0.110	0.0026 U	0.0026 U	1.7 J	0.11 J
07	015	29163	29.0	0.03		0.87 J				
07	015	29165	30.0	0.129	0.167	0.132	0.0026 U	0.0026 U	<100	
07	016	29026	0.0	0.63		8.31 J				
07	016	29027	1.0	1.10		4.49			43.5 J	
07	016	29028	2.0	0.86		4.20				
07	016	29029	3.0	0.52		1.65 J			<100	
07	016	29030	4.0	0.368	0.427	0.412	0.0025 U	0.0025 UJ	1.7 J	0.16 J
07	016	29031	6.0	0.53		0.39 UJ				
07	016	29032	7.0	0.44		0.89 J			<100	
07	016	29033	8.0	0.52		1.28 J				
07	016	29034	9.0	0.07		1.18 J			<100	
07	016	29035	10.0	0.40		2.31 J				
07	016	29036	11.0	0.24		1.04 J			<100	
07	016	29037	12.0	0.85		3.04 J				
07	016	29038	13.0	0.21		0.65 J			<100	
07	016	29039	14.0	0.73	0.270	0.258	0.0026 U	0.0026 UJ	0.68 J	0.12 J
07	016	29040	16.0	0.28		0.79 J				
07	016	29041	17.0	0.18		1.14 J			<100	
07	016	29042	18.0	0.25		1.89				
07	016	29043	19.0	0.21		1.74			<100	
07	016	29044	21.0	0.19		1.18 J			<100	
07	016	29045	22.0	0.35		0.34				
07	016	29046	23.0	0.29		0.89 J			<100	
07	016	29047	24.0	0.112	0.173	0.111	0.0026 U	0.0026 UJ	0.65 J	0.069 J
07	016	29050	26.0	0.20		1.16				

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	016	29051	27.0	0.26		1.27 J			<100	
07	016	29055	28.0	0.27		0.93 J				
07	016	29056	29.0	0.24		1.68			<100	
07	016	29057	30.0	0.145	0.096 J	0.099 J	0.0026 U	0.0026 UJ	1.1 J	0.18 J
07	017	28745	0.0	0.59		11.31 J				
07	017	28746	1.0	0.76	24.1	11.6	0.0027 U	0.0091	58.1	1.2 J
07	017	28747	4.0	0.77		14.33 J			<100	
07	017	28748	6.0	0.60		4.45 J			<100	
07	017	28753	8.0	0.11		0.77 UJ			<100	
07	017	28754	10.0	0.20		0.58 J			<100	
07	017	28763	11.0	0.209	0.398	0.302	0.0025 U	0.0025 U	1.6 J	0.20 J
07	017	28764	14.0	0.40 J		1.48			<100	
07	017	28765	15.0	0.33		1.30 J				
07	017	28766	16.0	0.24 J		0.38			<100	
07	017	28767	17.0	0.19		1.77				
07	017	28768	18.0	0.30 J		1.23 J			<100	
07	017	28771	20.0	0.28		0.74 J			<100	
07	017	28772	21.0	0.233	0.152 J	0.145 J	0.0026 U	0.0026 U	1.6 J	0.17 J
07	017	28778	23.0	0.25 J		0.91 J				
07	017	28779	24.0	0.23		0.53 J			<100	
07	017	28780	25.0	0.19 J		0.48 J				
07	017	28781	26.0	NS		NS			<100	
07	017	28782	27.0	0.23		1.33				
07	017	28787	28.0	NS		NS			<100	
07	017	28788	29.0	0.26		0.57 J				
07	017	28793	30.0	0.129	0.119	0.099 J	0.0026 U	0.0026 U	2.4 J	0.17 J
07	018	28447	0.0	0.88		11.62 J			<100	
07	018	28448	2.0	0.51		1.84 J			<100	
07	018	28450	3.0	0.70		2.31				
07	018	28451	4.0	0.37		0.61			<100	
07	018	28457	5.0	0.68		1.33 J				
07	018	28458	6.0	0.76		1.26 J			<100	
07	018	28456	7.0	0.297	0.288	0.293	0.0025 U	0.0025 U	1.8 J	0.19 J
07	018	28463	10.0	0.05 UJ		1.20 J			<100	
07	018	28469	11.0	0.32		1.15				
07	018	28470	12.0	0.07 UJ		1.71 J			<100	
07	018	28471	13.0	0.28 J		1.26				
07	018	28472	14.0	0.30		1.22 J			<100	
07	018	28473	15.0	0.02 UJ		1.71 J				
07	018	28474	16.0	0.30 J		0.33			<100	
07	018	28475	17.0	0.219	0.169	0.230	0.0026 U	0.0026 U	4.1 J	0.17 J
07	018	28476	22.0	0.33		0.70 J			<100	
07	018	28477	23.0	0.32 J		1.41 J				
07	018	28478	24.0	0.29 J		0.76 J			<100	
07	018	28479	25.0	0.06 UJ		1.32 J				
07	018	28480	26.0	0.22 J		0.52 J			<100	
07	018	28487	27.0	0.174	0.140	0.142	0.0025 U	0.0025 U	1.0 J	0.076 J
07	018	28488	29.0	0.22		1.23				
07	018	28489	30.0	0.223	0.201	0.182	0.0026 U	0.0026 U	1.3 J	0.11 J
07	022	29657	0.0	NS		NS			<100	
07	022	29656	1.0	0.56	9.5	9.3	0.0025 U	0.0025 UJ	9.9	0.42 J

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	022	29664	3.0	0.83		1.49 J				
07	022	29665	4.0	1.04		2.69 J			<100	
07	022	29666	5.0	0.39		1.03 J				
07	022	29667	6.0	0.33		1.40 J			<100	
07	022	29671	7.0	0.42		0.89 J				
07	022	29672	8.0	0.71		1.30 J			<100	
07	022	29673	10.0	0.25		1.27 J			<100	
07	022	29677	11.0	0.206	0.245	0.246	0.0025 U	0.0025 U	1.3 J	0.13 J
07	022	29678	13.0	0.03		0.70				
07	022	29679	14.0	0.43		0.98 J			<100	
07	022	29680	15.0	0.31		1.50				
07	022	29681	16.0	0.31		0.61			<100	
07	022	29687	17.0	0.26		1.90				
07	022	29688	18.0	0.38		0.78			<100	
07	022	29689	20.0	0.23		0.47			<100	
07	022	29692	21.0	0.169	0.345	0.262	0.0025 U	0.0025 UJ	1.5 J	0.15 J
07	022	29693	24.0	0.30		0.43			<100	
07	022	29694	25.0	0.22		1.09				
07	022	29698	26.0	0.22		0.61 J			<100	
07	022	29699	27.0	0.31		1.56				
07	022	29700	28.0	0.21		1.48			<100	
07	022	29701	29.0	0.19		0.78 J				
07	022	29702	30.0	0.132	0.206	0.173	0.0025 U	0.0025 UJ	1.7 J	0.17 J
07	023	29570	0.0	0.57		2.14			<100	
07	023	29571	1.0	0.57		1.21 J				
07	023	29572	2.0	0.36		1.73			<100	
07	023	29573	3.0	0.36		1.45				
07	023	29574	4.0	0.42		1.73 J			<100	
07	023	29575	5.0	0.77		2.07 J				
07	023	29576	6.0	0.51		1.29 J			<100	
07	023	29577	7.0	0.195	0.229	0.189	0.0025 U	0.0025 UJ	1.3 J	0.12 J
07	023	29578	9.0	0.42		2.01 J				
07	023	29579	10.0	0.18		0.99			<100	
07	023	29580	11.0	0.33		0.43 J				
07	023	29581	12.0	0.25		1.17 J			<100	
07	023	29582	13.0	0.49		1.55				
07	023	29583	14.0	0.24		0.32			<100	
07	023	29584	15.0	0.19		0.54				
07	023	29585	16.0	0.31		0.63 J			<100	
07	023	29586	17.0	0.153	0.217	0.131	0.0025 U	0.0025 UJ	0.97 J	0.12 J
07	023	29587	19.0	0.19		0.61 J				
07	023	29588	20.0	0.42		0.67			<100	
07	023	29593	21.0	0.23		1.33 J				
07	023	29594	22.0	0.27		0.75 J			<100	
07	023	29595	23.0	0.51		3.22				
07	023	29596	24.0	0.24		1.08 J			<100	
07	023	29597	25.0	0.25		0.47				
07	023	29598	26.0	0.22		0.67 J			<100	
07	023	29599	27.0	0.226	0.206	0.179	0.0025 U	0.0025 UJ	2.0 J	0.28 J
07	023	29600	29.0	0.22		0.97				
07	023	29601	30.0	0.172	0.216	0.166	0.0026 U	0.0026 UJ	1.9 J	0.18 J

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	024	29401	0.0	0.50		9.08				
07	024	29402	1.0	0.52		1.09 J			<100	
07	024	29403	4.0	0.38	0.48	0.53	0.0025 U	0.0025 UJ	1.2 J	0.18 J
07	024	29404	6.0	0.31		1.64				
07	024	29405	7.0	0.46		0.96 J			<100	
07	024	29406	9.0	0.35		1.14 J			<100	
07	024	29407	10.0	0.23		1.21 J				
07	024	29408	11.0	0.07		1.25 J			<100	
07	024	29409	12.0	0.06		0.77 J				
07	024	29410	13.0	0.08		2.20			<100	
07	024	29416	14.0	0.178	0.251	0.225	0.0025 U	0.0025 UJ	1.8 J	0.19 J
07	024	29421	16.0	0.06		1.20 J				
07	024	29422	17.0	0.25		1.40			<100	
07	024	29423	19.0	0.26		0.97 J			<100	
07	024	29424	20.0	0.18		0.63 J				
07	024	29425	21.0	0.21		0.53 J			<100	
07	024	29429	23.0	0.39		1.96			<100	
07	024	29430	24.0	0.164	0.202	0.168	0.0025 U	0.0025 UJ	1.3 J	0.12 J
07	024	29431	26.0	0.05		1.10 J				
07	024	29432	27.0	0.19		0.71 J			<100	
07	024	29440	28.0	0.25		1.20 J				
07	024	29441	29.0	0.20		0.56 J			<100	
07	024	29442	30.0	0.155	0.190	0.161	0.0025 U	0.0025 UJ	0.62 J	0.10 J
07	025	29066	0.0	0.68		8.35			<100	
07	025	29067	1.0	0.85	2.69	2.63	0.0025 U	0.0025 U	6.4	0.35 J
07	025	29068	3.0	0.46		0.49 J				
07	025	29069	4.0	0.47		1.57 J			<100	
07	025	29076	5.0	0.58		0.85 J				
07	025	29077	6.0	0.63		0.62			<100	
07	025	29079	7.0	0.53		0.89 J				
07	025	29080	8.0	0.57		1.56 J			<100	
07	025	29084	10.0	0.34		0.47			<100	
07	025	29085	11.0	0.373	0.390	0.322	0.0025 U	0.0025 U	0.60 J	0.10 J
07	025	29086	13.0	0.25		0.56 J				
07	025	29087	14.0	0.34		1.62			<100	
07	025	29088	15.0	0.23 J		1.07				
07	025	29089	16.0	0.32		0.31			<100	
07	025	29097	17.0	0.21		1.71				
07	025	29098	18.0	0.39		0.49 J			<100	
07	025	29095	19.0	0.42		0.41 J				
07	025	29096	20.0	0.27		1.03 J			<100	
07	025	29099	21.0	0.185	0.216	0.179	0.0025 U	0.0025 U	1.6 J	0.10 J
07	025	29100	23.0	0.30		1.50				
07	025	29101	24.0	0.20		0.38			<100	
07	025	29102	25.0	0.26		0.84 J				
07	025	29103	26.0	0.27		1.05 J			<100	
07	025	29104	27.0	0.21		0.43				
07	025	29105	28.0	0.27		2.81			<100	
07	025	29106	29.0	0.23		0.63				
07	025	29107	30.0	0.120 J	0.201	0.213	0.0026 U	0.0026 U	2.1 J	0.16 J
07	026	28830	0.0	0.95		0.98 J			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	026	28831	1.0	1.33 J		4.95				
07	026	28832	2.0	1.27		0.78			<100	
07	026	28833	3.0	0.62		3.05				
07	026	28834	4.0	0.39		0.77 J			<100	
07	026	28842	5.0	0.61		2.35				
07	026	28843	6.0	0.63 J		0.97 J			<100	
07	026	28844	7.0	0.365	0.236	0.256	0.0025 U	0.0025 U	0.91 J	0.069 J
07	026	28845	9.0	0.61		0.47 J				
07	026	28846	10.0	0.03 UJ		1.16 J			<100	
07	026	28851	11.0	0.26		1.35 J				
07	026	28852	12.0	0.44		1.77			<100	
07	026	28853	13.0	0.46		1.44 J				
07	026	28854	14.0	0.33 J		1.33			<100	
07	026	28857	16.0	0.29		0.88 J			<100	
07	026	28858	17.0	0.104	0.114	0.125	0.0025 U	0.0025 U	1.0 J	0.077 J
07	026	28859	20.0	0.28 J		1.00 J			<100	
07	026	28864	21.0	0.31		0.39				
07	026	28865	22.0	0.25 J		0.57 J			<100	
07	026	28866	23.0	0.30		1.25 J				
07	026	28867	24.0	0.26		1.55			<100	
07	026	28868	25.0	0.29		1.43				
07	026	28869	26.0	0.27		0.42			<100	
07	026	28875	27.0	0.131	0.114	0.092 J	0.0025 U	0.0025 U	1.1 J	0.14 J
07	026	28876	29.0	0.23		1.17 J				
07	026	28877	30.0	0.115	0.129	0.087 J	0.0025 U	0.0025 U	1.7 J	0.092 J
07	027	28506	0.0	0.84 J		0.88 J				
07	027	28507	1.0	0.97		3.57			<100	
07	027	28514	2.0	0.48 J		0.88 J				
07	027	28515	3.0	0.62		1.52 J			<100	
07	027	28517	4.0	0.52	0.97	0.294	0.0025 U	0.0025 U	1.7 J	0.13 J
07	027	28518	6.0	0.63 J		1.11 J				
07	027	28519	7.0	0.77 J		0.87 J			<100	
07	027	28520	9.0	0.05		1.46			<100	
07	027	28521	10.0	0.44 J		0.54				
07	027	28522	11.0	0.07 UJ		1.45			<100	
07	027	28523	12.0	0.37		1.96				
07	027	28524	13.0	0.36 J		1.35 J			<100	
07	027	28525	14.0	0.270	0.257	0.209	0.0025 U	0.0025 U	1.4 J	0.15 J
07	027	28526	16.0	0.07 UJ		0.59 J				
07	027	28527	17.0	0.06		0.69 J			<100	
07	027	28528	18.0	0.28 J		3.53				
07	027	28529	19.0	0.30 J		1.49 J			<100	
07	027	28530	20.0	0.33		2.41				
07	027	28531	21.0	0.25 J		0.86 J			<100	
07	027	28532	22.0	0.36 J		0.96 J				
07	027	28533	23.0	0.34		0.32			<100	
07	027	28538	24.0	0.227	0.124	0.170	0.0025 U	0.0025 U	0.79 J	0.10 J
07	027	28541	26.0	0.20		0.45				
07	027	28542	27.0	0.27		1.82 J			<100	
07	027	28549	29.0	0.06		0.82 J			<100	
07	027	28551	30.0	0.244	0.194	0.145	0.0025 U	0.0025 U	0.63 J	0.14 J

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	031	29618	1.0	0.71		33.77			<100	
07	031	29619	3.0	0.39		6.77			<100	
07	031	29620	4.0	0.455	0.411	0.397	0.0025 U	0.0025 UJ	3.0 J	0.15 J
07	031	29628	6.0	0.63		1.47 J				
07	031	29629	7.0	0.26		1.47 J			<100	
07	031	29630	8.0	0.26		0.89 J				
07	031	29631	9.0	0.35		0.65			<100	
07	031	29632	10.0	0.27		0.59				
07	031	29633	11.0	0.07		2.58 J			<100	
07	031	29634	12.0	0.32		1.56 J				
07	031	29635	13.0	0.42		2.04			<100	
07	031	29636	14.0	0.218	0.248	0.178	0.0025 U	0.0025 UJ	1.4 J	0.20 J
07	031	29638	16.0	0.31		1.61 J				
07	031	29639	17.0	0.28		0.54			<100	
07	031	29637	19.0	0.27		1.20 J			<100	
07	031	29640	20.0	0.20		1.80				
07	031	29641	21.0	0.26		0.76 J			<100	
07	031	29642	23.0	0.48		1.79			<100	
07	031	29649	24.0	0.152	0.167	0.139	0.0025 U	0.0025 UJ	1.1 J	0.16 J
07	031	29650	26.0	0.18		0.32 J				
07	031	29651	27.0	0.27		0.34			<100	
07	031	29652	28.0	0.29		1.43				
07	031	29653	29.0	0.22		0.50			<100	
07	031	29654	30.0	0.130	0.143	0.136	0.0025 U	0.0025 UJ	1.8 J	0.19 J
07	032	29544	0.0	0.74		25.02			<100	
07	032	29545	1.0	0.69	18.5	18.9	0.0027 U	0.0027 UJ	23.9	0.37 J
07	032	29546	4.0	1.20		2.20 J			<100	
07	032	29547	5.0	1.21		1.81 J				
07	032	29548	6.0	0.92		2.52 J			<100	
07	032	29549	7.0	0.55		2.13				
07	032	29550	8.0	0.31		1.86			<100	
07	032	29551	9.0	0.42		1.05 J				
07	032	29552	10.0	0.31		1.74			<100	
07	032	29553	11.0	0.252	0.423	0.386	0.0026 U	0.0026 UJ	2.2 J	0.15 J
07	032	29554	13.0	0.41		1.66				
07	032	29555	14.0	0.27		0.56 J			<100	
07	032	29556	15.0	0.29		0.94 J				
07	032	29557	16.0	0.23		2.03			<100	
07	032	29558	18.0	0.06		0.61 J			<100	
07	032	29559	19.0	0.29		2.61				
07	032	29560	20.0	0.40		0.95 J			<100	
07	032	29561	21.0	0.167	0.201	0.178	0.0025 U	0.0025 UJ	1.3 J	0.17 J
07	032	29562	23.0	0.23		2.20				
07	032	29563	24.0	0.22		1.00			<100	
07	032	29564	25.0	0.25		1.14				
07	032	29565	26.0	0.25		1.33			<100	
07	032	29566	27.0	0.31		0.73 J				
07	032	29567	28.0	0.28		2.21 J			<100	
07	032	29568	29.0	0.26		0.95 J				
07	032	29569	30.0	0.126	0.184	0.166	0.0025 U	0.0025 UJ	1.7 J	0.18 J
07	033	29483	0.0	0.51		3.57			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	033	29485	1.0	0.74		6.62				
07	033	29486	2.0	1.31		4.65			<100	
07	033	29491	3.0	0.70		2.19				
07	033	29492	4.0	0.39		0.86 J			<100	
07	033	29494	5.0	0.45		1.19 J				
07	033	29493	6.0	0.51		0.98 J			<100	
07	033	29500	7.0	0.52	0.38	0.282	0.0026 U	0.0026 UJ	1.2 J	0.16 J
07	033	29503	10.0	0.34		1.35			<100	
07	033	29506	11.0	0.29		0.98 J				
07	033	29507	12.0	0.40		1.55 J			<100	
07	033	29513	13.0	0.43		0.57				
07	033	29514	14.0	0.37		1.48 J			<100	
07	033	29515	16.0	0.27		1.53 J			<100	
07	033	29516	17.0	0.184	0.117	0.178	0.0025 U	0.0025 UJ	0.80 J	0.15 J
07	033	29517	19.0	0.29		0.74				
07	033	29518	20.0	0.35		0.93 J			<100	
07	033	29519	21.0	0.24		2.01				
07	033	29520	22.0	0.30		1.02 J			<100	
07	033	29524	23.0	0.23		1.40 J				
07	033	29525	24.0	0.27		0.74 J			<100	
07	033	29529	25.0	0.19		1.74				
07	033	29530	26.0	0.18		0.78 J			<100	
07	033	29531	27.0	0.157	0.151	0.156	0.0025 U	0.0025 UJ	1.1 J	0.13 J
07	033	29532	29.0	0.19		2.19				
07	033	29533	30.0	0.097 J	0.116	0.130	0.0025 U	0.0025 UJ	1.4 J	0.17 J
07	034	28961	0.0	1.00		1.32 J				
07	034	28962	1.0	0.66		0.63 J			<100	
07	034	28963	2.0	0.37		0.58 J				
07	034	28964	3.0	0.64		0.64 UJ			<100	
07	034	28969	4.0	0.57	0.386	0.322	0.0026 U	0.0026 U	2.1 J	0.21 J
07	034	28971	6.0	0.76		1.07 J				
07	034	28972	7.0	0.44		0.70 J			<100	
07	034	28973	8.0	0.22		1.78 J				
07	034	28974	9.0	0.30		1.46 J			<100	
07	034	28975	10.0	0.39		2.38 J				
07	034	28976	11.0	0.38		2.02 J			<100	
07	034	28977	12.0	0.37		0.57 J				
07	034	28978	13.0	0.26		0.60 J			<100	
07	034	28979	14.0	0.298	0.228	0.234	0.0025 U	0.0025 UJ	1.7 J	0.13 J
07	034	28983	16.0	0.20		0.36 UJ				
07	034	28984	17.0	0.04		0.54 J			<100	
07	034	28985	18.0	0.24		0.51 UJ				
07	034	28986	19.0	0.24		0.86 J			<100	
07	034	28991	20.0	0.25		1.15 J				
07	034	28992	21.0	0.33		0.69 UJ			<100	
07	034	28993	23.0	0.41		0.73 J			<100	
07	034	28994	24.0	0.346	0.234	0.238	0.0026 U	0.0026 UJ	0.36 J	0.082 J
07	034	28995	26.0	0.22		0.90 J				
07	034	28996	27.0	0.20		1.07 J			<100	
07	034	28999	28.0	0.06		2.38 J				
07	034	29000	29.0	0.25		1.65 J			<100	

Table 1
SU06 and SU07 Soil Boring Sample Results

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	034	29004	30.0	0.220	0.165	0.160	0.0025 U	0.0025 UJ	1.4 J	0.15 J
07	035	28901	0.0	0.71		6.13			<100	
07	035	28902	1.0	0.93	32.4	10.3	0.0016 J	0.022	15.1	0.37 J
07	035	28903	4.0	0.77		6.75			<100	
07	035	28909	5.0	0.69		4.64				
07	035	28910	6.0	0.63		3.41			<100	
07	035	28911	7.0	0.87		1.75 J				
07	035	28912	8.0	0.42		1.81			<100	
07	035	28914	9.0	0.49		0.64 J				
07	035	28915	10.0	0.24		1.22 J			<100	
07	035	28916	11.0	0.294	0.307	0.337	0.0025 U	0.0025 U	1.8 J	0.096 J
07	035	28917	13.0	0.35		2.42				
07	035	28918	14.0	0.34		1.06 J			<100	
07	035	28919	15.0	0.29		3.04				
07	035	28920	16.0	0.04		0.52 J			<100	
07	035	28921	17.0	0.14		0.87 J				
07	035	28922	18.0	0.28		1.25 J			<100	
07	035	28927	19.0	0.05		2.76				
07	035	28928	20.0	0.17		0.35 J			<100	
07	035	28929	21.0	0.131	0.166	0.220	0.0026 U	0.0026 U	0.95 J	0.11 J
07	035	28930	23.0	0.31		1.22				
07	035	28933	24.0	0.25		0.54 J			<100	
07	035	28934	25.0	0.33		0.50 J				
07	035	28935	26.0	0.05		0.52				
07	035	28936	27.0	0.34		1.24			<100	
07	035	28942	28.0	0.17		0.88 J			<100	
07	035	28943	29.0	0.19		1.27				
07	035	28944	30.0	0.282	0.206	0.262	0.0026 U	0.0026 U	1.3 J	0.17 J

Table 1
SU06 and SU07 Soil Boring Sample Results

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Be - Beryllium

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Figure 1 for boring locations.

DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

DL sample is analyzed on Site for Ni using x-ray fluorescence spectroscopy by Stone Environmental Inc. Ni result that is between the detection limit of 40 mg/kg and the reporting limit of 100 mg/kg is estimated. Ni result that is less than the detection limit of 40 mg/kg is reported as less than the reporting limit (<100 mg/kg).

SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.

NS - Not sampled due to insufficient recovery.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed

Table 2
 SU06 and SU07 Soil Boring Sample Results
 Severn Trent Laboratories, Inc.

Survey Unit	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	-234 (pCi/g)	-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	001	28342	4.0	0.38	1.08	0.77	0.0025	0.0025	2.1 J	0.13 J
06	001	28359	14.0	0.191	0.187	0.223	0.0025	0.0025	2.8 J	0.14 J
06	001	28371	24.0	0.160	0.200	0.130	0.0025	0.0025	1.1 J	0.098 J
06	001	28384	30.0	0.120	0.127	0.134	0.0026	0.0026	3.1 J	0.15 J
06	002	27977	1.0	0.474	2.44	1.19	0.0025	0.0025	3.7 J	0.26 J
06	002	28008	11.0	0.417	0.317	0.329	0.0025	0.0025	1.7 J	0.18 J
06	002	28017	21.0	0.141	0.184	0.206	0.0026	0.0026	1.3 J	0.19 J
06	002	28040	30.0	0.151	0.088 J	0.167	0.0026	0.0026	2.3 J	0.21 J
06	003	27421	7.0	1.08	0.75	0.76	0.0030	0.0030	6.7	0.50 J
06	003	27436	17.0	0.187	0.204	0.173	0.0025	0.0025	1.6 J	0.13 J
06	003	27453	27.0	0.257	0.266	0.180	0.0026	0.0026	2.9 J	0.21 J
06	003	27457	30.0	0.198	0.140	0.197	0.0026	0.0026	3.5 J	0.32 J
06	004	27318	4.0	0.65	0.69	0.410	0.0025	0.0025	4.8	0.31 J
06	004	27335	14.0	0.261	0.211	0.213	0.0025	0.0025	1.4 J	0.19 J
06	004	27365	24.0	0.187	0.185	0.177	0.0025	0.0025	3.3 J	0.20 J
06	004	27379	30.0	0.121	0.138	0.123 J	0.0025	0.0025	2.9 J	0.38 J
06	005	26851	1.0	0.83	2.37	1.87	0.0027	0.0024 J	6.6	0.18 J
06	005	26873	11.0	0.268	0.241	0.295	0.0025	0.0025	3.1 J	0.20 J
06	005	26899	21.0	0.235	0.220	0.227	0.0025	0.0025	1.9 J	0.17 J
06	005	26909	30.0	0.183	0.154	0.222	0.0025	0.0025	3.0 J	0.25 J
06	006	28398	1.0	0.58	0.50	0.61	0.0025	0.0025	9.8	0.91
06	006	28413	11.0	0.249	0.233	0.244	0.0025	0.0025	1.3 J	0.10 J
06	006	28420	21.0	0.223	0.180	0.170	0.0025	0.0025	1.5 J	0.11 J
06	006	28427	30.0	0	0.148	0.113	0.0025	0.0025	2.4 J	0.17 J
06	007	28107	7.0	0.42	0.42	0.380	0.00071 J	0.0025	1.7 J	0.15 J
06	007	28144	17.0	0.281	23.8	11.2	0.0025	0.0025	1.9 J	0.11 J
06	007	28171	27.0	0.239	29.0	15.0	0.0025	0.0025	2.8 J	0.20 J
06	007	28173	30.0	0.44	20.7	11.5	0.0025	0.0025	2.2 J	0.15 J
06	008	27882	4.0	0.356	1.91	0.83	0.0025	0.00061 J	2.8 J	0.22 J
06	008	27911	14.0	0.147	0.236	0.175	0.0025	0.0025	1.5 J	0.17 J
06	008	27931	24.0	0.259	0.205	0.170	0.0026	0.0026	1.8 J	0.19 J
06	008	27938	30.0	0.139	0.108	0.183	0.0026	0.0026	1.5 J	0.17 J
06	009	27682	1.0	0.97	7.40	6.06	0.0028	0.0071	330	0.41 J
06	009	27705	11.0	0.269	0.311	0.245	0.0025	0.0025	1.8 J	0.18 J
06	009	27720	21.0	0.249	0.174	0.179	0.0026	0.0026	0.98 J	0.13 J
06	009	27743	30.0	0.149	0.149	0.128	0.0025	0.0025	1.7 J	0.13 J
06	010	27593	7.0	0.220	0.294	0.272	0.0026	0.0026	1.4 J	0.14 J
06	010	27609	17.0	0.105	0.134	0.133	0.0026	0.0026	0.89 J	0.092 J
06	010	27635	27.0	0.181	0.159	0.127	0.0026	0.0026 J	1.3 J	0.16 J
06	010	27642	30.0	0.148	0.167	0.145	0.0026	0.0026 J	1.1 J	0.17 J
06	012	28205	4.0	0.79	3.19	2.33	0.0078	0.024	5.6	0.20 J
06	012	28223	14.0	0.172	0.208	0.164	0.0025	0.0025	1.8 J	0.12 J
06	012	28257	24.0	0.178	0.301	0.163	0.0025	0.0025	0.99 J	0.058 J
06	012	28273	30.0	0.089 J	0.185	0.117	0.0025	0.0025	1.9 J	0.12 J
06	013	28278	1.0	0.64	5.19	1.93	0.0077	0.030	7.6 J	0.34 J
06	013	28299	11.0	0.210	0.224	0.215	0.0025	0.0025	1.2 J	0.071 J
06	013	28318	21.0	0.302	0.194	0.138	0.0025	0.0025	2.8 J	0.086 J
06	013	28326	30.0	0.240	0.175	0.166	0.0025	0.0025	3.2 J	0.087 J
06	014	27502	7.0	0.286	0.322	0.231	0.0025	0.0025	1.3 J	0.14 J
06	014	27528	17.0	0.172	0.139	0.147	0.0025	0.0025	1.0 J	0.11 J
06	014	27555	27.0	0.168	0.156	0.167	0.0025	0.0025	1.9 J	0.24 J
06	014	27561	30.0	0.262	0.122	0.141	0.0026	0.0026	1.4 J	0.14 J
06	015	27776	4.0	1.07	4.62	4.89	0.00054 J	0.0018 J	13.1	0.49 J

Table 2
SU06 and SU07 Soil Boring Sample Results
Severn Trent Laboratories, Inc.

Survey Unit	Boring Location	Sample ID	Depth (feet)	Pb-232 (pCi/g)	234 (pCi/g)	238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
06	015	27791	14.0	0.259	0.164	0.182	0.0025	0.0025	1.4 J	0.11 J
06	015	27816	24.0	0.167	0.131	0.140	0.0026	0.0026	2.5 J	0.19 J
06	015	27832	30.0	0.196	0.180	0.138	0.0025	0.0025	1.5 J	0.12 J
06	016	27060	1.0	0.72	5.76	5.42	0.0026 J	0.018 J	21.7	0.30 J
06	016	27082	11.0	0.170	0.213	0.235	0.0025	0.0025	2.3 J	0.21 J
06	016	27094	21.0	0.328	0.322	0.329	0.0025	0.0025	0.92 J	0.12 J
06	016	27117	30.0	0.225	0.128	0.145	0.0026	0.0026	1.8 J	0.22 J
07	004	29454	1.0	0.386	0.53	0.47	0.0026	0.0026 J	13.6	0.47 J
07	004	29463	11.0	0.74	0.64	0.46	0.0026	0.0026 J	9.2	0.63
07	004	29474	21.0	0.207 J	0.220	0.154	0.0026	0.0026 J	1.0 J	0.13 J
07	004	29482	30.0	0.125	0.111	0.120	0.0026	0.0026 J	2.2 J	0.16 J
07	005	29306	7.0	0.364	0.322	0.305	0.0025	0.0025	2.3 J	0.16 J
07	005	29320	17.0	0.176	0.157	0.193	0.0026	0.0026	1.8 J	0.048 J
07	005	29334	27.0	0.201	0.162	0.178	0.0026	0.0026	1.1 J	0.084 J
07	005	29341	30.0	0.141	0.225	0.182	0.0026	0.0026	2.1 J	0.23 J
07	006	29256	4.0	0.78	0.62	0.55	0.0025	0.0025	2.0 J	0.12 J
07	006	29269	14.0	0.248	0.296	0.271	0.0026	0.0026	2.3 J	0.084 J
07	006	29283	24.0	0.207	0.318	0.311	0.0026	0.0026	1.1 J	0.079 J
07	006	29288	30.0	0.125	0.133	0.131	0.0026	0.0026	1.7 J	0.13 J
07	007	29209	1.0	0.73	15.3	8.8	0.0028	0.0028	19.3	0.61
07	007	29222	11.0	0.222	0.320	0.299	0.0026	0.0026	3.2 J	0.26 J
07	007	29237	21.0	0.145	0.229	0.171	0.0026	0.0026	1.2 J	0.074 J
07	007	29247	30.0	0.161	0.167	0.158	0.0026	0.0026	0.98 J	0.081 J
07	012	29791	7.0	0.181	0.223	0.013	0.0025	0.0025 J	1.5 J	0.14 J
07	012	29814	17.0	0.121	0.153	0.107	0.0025	0.0025 J	1.1 J	0.14 J
07	012	29833	27.0	0.179	0.155	0.176	0.0025	0.0025 J	1.2 J	0.16 J
07	012	29835	30.0	0.246	0.158	0.145	0.0025	0.0025 J	4.6	0.31 J
07	013	29717	4.0	0.57	3.04	2.70	0.0025	0.0025 J	3.4 J	0.21 J
07	013	29732	14.0	0.221	0.271	0.288	0.0025	0.0025 J	2.1 J	0.24 J
07	013	29746	24.0	0.215	0.209	0.165	0.0025	0.0025 J	0.70 J	0.10 J
07	013	29754	30.0	0.177	0.109	0.013	0.0025	0.0025 J	1.6 J	0.16 J
07	014	29346	1.0	0.432	26.8	26.6	0.0025	0.0025 J	5.3	0.19 J
07	014	29355	11.0	0.153	0.340	0.300	0.0025	0.0025 J	2.3 J	0.11 J
07	014	29363	21.0	0.110	0.190	0.184	0.0025	0.0025 J	1.0 J	1
07	014	29380	30.0	0.165	0.155	0.139	0.0026	0.0026 J	2.4 J	0.17 J
07	015	29127	7.0	0.392	0.297	0.219	0.0025	0.0025	1.9 J	0.13 J
07	015	29144	17.0	0.125	0.137	0.165	0.0025	0.0025	1.0 J	0.075 J
07	015	29162	27.0	0.226	0.170	0.110	0.0026	0.0026	1.7 J	0.11 J
07	015	29165	30.0	0.129	0.167	0.132	0.0026	0.0026		
07	016	29030	4.0	0.368	0.427	0.412	0.0025	0.0025 J	1.7 J	0.16 J
07	016	29039	14.0	0.73	0.270	0.258	0.0026	0.0026 J	0.68 J	0.12 J
07	016	29047	24.0	0.112	0.173	0.111	0.0026	0.0026 J	0.65 J	0.069 J
07	016	29057	30.0	0.145	0.096 J	0.099 J	0.0026	0.0026 J	1.1 J	0.18 J
07	017	28746	1.0	0.76	24.1	11.6	0.0027	0.0091	58.1	1.2 J
07	017	28763	11.0	0.209	0.398	0.302	0.0025	0.0025	1.6 J	0.20 J
07	017	28772	21.0	0.233	0.152 J	0.145 J	0.0026	0.0026	1.6 J	0.17 J
07	017	28793	30.0	0.129	0.119	0.099 J	0.0026	0.0026	2.4 J	0.17 J
07	018	28456	7.0	0.297	0.288	0.293	0.0025	0.0025	1.8 J	0.19 J
07	018	28475	17.0	0.219	0.169	0.230	0.0026	0.0026	4.1 J	0.17 J
07	018	28487	27.0	0.174	0.140	0.142	0.0025	0.0025	1.0 J	0.076 J
07	018	28489	30.0	0.223	0.201	0.182	0.0026	0.0026	1.3 J	0.11 J
07	022	29656	1.0	0.56	9.5	9.3	0.0025	0.0025 J	9.9	0.42 J
07	022	29677	11.0	0.206	0.245	0.246	0.0025	0.0025	1.3 J	0.13 J

Table 2
 SU06 and SU07 Soil Boring Sample Results
 Severn Trent Laboratories, Inc.

Survey Unit	Boring Location	Sample ID	Depth (feet)	Pb (ppb)	Cd (ppb)	Cu (ppb)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
07	022	29692	21.0	0.169	0.345	0.262	0.0025	0.0025 J	1.5 J	0.15 J
07	022	29702	30.0	0.132	0.206	0.173	0.0025	0.0025 J	1.7 J	0.17 J
07	023	29577	7.0	0.195	0.229	0.189	0.0025	0.0025 J	1.3 J	0.12 J
07	023	29586	17.0	0.153	0.217	0.131	0.0025	0.0025 J	0.97 J	0.12 J
07	023	29599	27.0	0.226	0.206	0.179	0.0025	0.0025 J	2.0 J	0.28 J
07	023	29601	30.0	0.172	0.216	0.166	0.0026	0.0026 J	1.9 J	0.18 J
07	024	29403	4.0	0.38	0.48	0.53	0.0025	0.0025 J	1.2 J	0.18 J
07	024	29416	14.0	0.178	0.251	0.225	0.0025	0.0025 J	1.8 J	0.19 J
07	024	29430	24.0	0.164	0.202	0.168	0.0025	0.0025 J	1.3 J	0.12 J
07	024	29442	30.0	0.155	0.190	0.161	0.0025	0.0025 J	0.62 J	0.10 J
07	025	29067	1.0	0.85	2.69	2.63	0.0025	0.0025	6.4	0.35 J
07	025	29085	11.0	0.373	0.390	0.322	0.0025	0.0025	0.60 J	0.10 J
07	025	29099	21.0	0.185	0.216	0.179	0.0025	0.0025	1.6 J	0.10 J
07	025	29107	30.0	0.120 J	0.201	0.213	0.0026	0.0026	2.1 J	0.16 J
07	026	28844	7.0	0.365	0.236	0.256	0.0025	0.0025	0.91 J	0.069 J
07	026	28858	17.0	0.104	0.114	0.125	0.0025	0.0025	1.0 J	0.077 J
07	026	28875	27.0	0.131	0.114	0.092 J	0.0025	0.0025	1.1 J	0.14 J
07	026	28877	30.0	0.115	0.129	0.087 J	0.0025	0.0025	1.7 J	0.092 J
07	027	28517	4.0	0.52	0.97	0.294	0.0025	0.0025	1.7 J	0.13 J
07	027	28525	14.0	0.270	0.257	0.209	0.0025	0.0025	1.4 J	0.15 J
07	027	28538	24.0	0.227	0.124	0.170	0.0025	0.0025	0.79 J	0.10 J
07	027	28551	30.0	0.244	0.194	0.145	0.0025	0.0025	0.63 J	0.14 J
07	031	29620	4.0	0.455	0.411	0.397	0.0025	0.0025 J	3.0 J	0.15 J
07	031	29636	14.0	0.218	0.248	0.178	0.0025	0.0025 J	1.4 J	0.20 J
07	031	29649	24.0	0.152	0.167	0.139	0.0025	0.0025 J	1.1 J	0.16 J
07	031	29654	30.0	0.130	0.143	0.136	0.0025	0.0025 J	1.8 J	0.19 J
07	032	29545	1.0	0.69	18.5	18.9	0.0027	0.0027 J	23.9	0.37 J
07	032	29553	11.0	0.252	0.423	0.386	0.0026	0.0026 J	2.2 J	0.15 J
07	032	29561	21.0	0.167	0.201	0.178	0.0025	0.0025 J	1.3 J	0.17 J
07	032	29569	30.0	0.126	0.184	0.166	0.0025	0.0025 J	1.7 J	0.18 J
07	033	29500	7.0	0.52	0.38	0.282	0.0026	0.0026 J	1.2 J	0.16 J
07	033	29516	17.0	0.184	0.117	0.178	0.0025	0.0025 J	0.80 J	0.15 J
07	033	29531	27.0	0.157	0.151	0.156	0.0025	0.0025 J	1.1 J	0.13 J
07	033	29533	31.0	0.097 J	0.116	0.130	0.0025	0.0025 J	1.4 J	0.17 J
07	034	28969	4.0	0.57	0.386	0.322	0.0026	0.0026	2.1 J	0.21 J
07	034	28979	14.0	0.298	0.228	0.234	0.0025	0.0025 J	1.7 J	0.13 J
07	034	28994	24.0	0.346	0.234	0.238	0.0026	0.0026 J	0.36 J	0.082 J
07	034	29004	30.0	0.220	0.165	0.160	0.0025	0.0025 J	1.4 J	0.15 J
07	035	28902	1.0	0.93	32.4	10.3	0.0016 J	0.022	15.1	0.37 J
07	035	28916	11.0	0.294	0.307	0.337	0.0025	0.0025	1.8 J	0.096 J
07	035	28929	21.0	0.131	0.166	0.220	0.0026	0.0026	0.95 J	0.11 J
07	035	28944	30.0	0.282	0.206	0.262	0.0026	0.0026	1.3 J	0.17 J

Table 2
SU06 and SU07 Soil Boring Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Be - Beryllium

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Figure 1 for boring locations.

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
E08	34	01	28631	1.0	0.63		1.01 UJ			<100	
E08	34	01	28632	2.0	0.57		2.21				
E08	34	01	28639	3.0	0.62		4.22			<100	
E08	34	01	28640	4.0	0.63		4.01				
E08	34	01	28645	5.0	0.34		2.61 J			<100	
E08	34	01	28646	6.0	0.42		1.11 J				
E08	34	01	28651	7.0	0.66		2.28 J			<100	
E08	34	01	28663	8.0	0.31		0.50 J				
E08	34	01	28664	9.0	0.33		0.88 J			<100	
E08	34	01	28667	10.0	0.37		1.33 J				
E08	34	01	28682	11.0	0.32		1.08 J			<100	
E08	34	01	28687	12.0	0.29		0.70 J				
E08	34	01	28694	13.0	0.42		1.45 J			<100	
E08	34	01	28695	14.0	0.27		0.62 J				
E08	34	01	28698	15.0	0.22		0.92 J			<100	
E08	34	01	28699	16.0	0.23		1.37				
E08	34	01	28708	17.0	0.20		0.62 J			<100	
E08	34	01	28717	18.0	0.20		4.00 J				
E08	34	01	28723	19.0	0.23		3.97 J			<100	
E08	34	01	28732	20.0	0.23		2.48 J				
E08	34	01	28801	21.0	0.21 J		2.35			<100	
E08	34	01	28802	22.0	0.17 J		2.19				
E08	34	01	28803	23.0	0.23		1.05 J			<100	
E08	34	01	28811	24.0	0.18 J		1.08				
E08	34	01	28823	25.0	0.27		0.59 J			<100	
E08	34	01	28829	26.0	0.47 J		1.04 J				
E08	34	01	28835	27.0	0.24		0.44 J			<100	
E08	34	01	28848	28.0	0.15		0.40				
E08	34	01	28847	29.0	0.25		0.72 J			<100	
E08	34	01	28850	30.0	0.194	0.187	0.179	0.0026 U	0.0026 U	2.3 J	0.17 J
E08	34	04	27455	1.0	0.66		5.13			<100	
E08	34	04	27456	3.0	NS		NS			<100	
E08	34	04	27461	9.0	NS		NS			<100	
E08	34	04	27462	10.0	0.10		5.66	0.0025 U	0.0025 U		
E08	34	04	27463	14.0	0.25		1.11	0.094	0.094		
E08	34	04	27464	15.0	0.31 J		6.70			<100	
E08	34	04	27467	16.0	0.22		5.87	0.113	0.113		
E08	34	04	27468	17.0	0.17		3.94			<100	
E08	34	04	27469	18.0	0.31		6.06	0.112	0.112		
E08	34	04	27470	19.0	0.17		4.17			<100	
E08	34	04	27479	20.0	0.28		5.01	0.0025 U	0.0025 U		
E08	34	04	27480	21.0	0.28		4.41			<100	
E08	34	04	27481	22.0	0.22		3.39	0.111	0.111		
E08	34	04	27482	23.0	0.17		3.06			<100	
E08	34	04	27483	24.0	0.13 J		2.66	0.131	0.131		
E08	34	04	27484	25.0	0.24		3.58			<100	
E08	34	04	27490	26.0	0.19 J		2.74	0.107	0.107		
E08	34	04	27491	27.0	0.16		0.77			<100	
E08	34	04	27492	28.0	0.24		9.45	0.109	0.109		
E08	34	04	27493	29.0	0.24 J		4.01			<100	
E08	34	04	27494	30.0	0.167 J	4.47	4.41	0.0025 U	0.0025 U	0.14 J	5.7
E08	34	04	27506	32.0	0.18		0.84	0.112	0.112		
E08	34	04	27507	33.0	0.19		0.80			<100	

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
E08	34	04	27508	34.0	0.22		2.40	0.109	0.109		
E08	34	04	27509	35.0	0.19		0.67 J			<100	
E08	34	04	27515	36.0	0.04		1.02	0.115	0.115		
E08	34	04	27516	37.0	0.24 J		0.94			<100	
E08	34	04	27517	38.0	0.02 UJ		0.24	0.115	0.115		
E08	34	04	27518	39.0	0.22 J		0.43			<100	
E08	34	04	27519	40.0	0.21 J		0.60 J	0.0026 U	0.0026 U		
E08	34	04	27520	41.0	0.10 J		0.69 J			<100	
E08	34	04	27527	42.0	0.17 J		0.73	0.116	0.116		
E08	34	04	27536	43.0	0.48 J		1.02 J			<100	
E08	34	04	27537	44.0	0.46 J		0.57	0.115	0.115		
E08	34	04	27538	45.0	0.33 J		0.50			<100	
E08	34	04	27539	46.0	0.29 J		0.60 J	0.135	0.135		
E08	34	04	27540	47.0	0.30 J		1.78			<100	
E08	34	04	27541	48.0	1.33 J		2.27	0.098	0.098		
E08	34	04	27542	49.0	1.12 J		3.15			<100	
E08	34	04	27545	50.0	0.82 J		2.22 J	0.0030 U	0.00089 U		
E08	34	04	27546	51.0	0.67 J		2.39 J			<100	
E08	34	04	27547	52.0	0.75 J		1.10 J	0.093	0.093		
E08	34	04	27548	53.0	0.61 J		0.57			<100	
E08	34	04	27551	54.0	0.61 J		1.16 J	0.115	0.115		
E08	34	04	27552	55.0	0.52 J		0.64			<100	
E08	34	04	27553	56.0	0.33 J		1.17 J	0.111	0.111		
E08	34	04	27554	57.0	0.34 J		0.94 J			<100	
E08	34	04	27557	58.0	0.41 J		2.11	0.112	0.112		
E08	34	04	27558	59.0	0.46 J		1.54 J			<100	
E08	34	04	27559	60.0	0.54 J		1.30	0.115	0.115		
E08	34	04	27560	61.0	0.27 J		0.89 J			<100	
E08	34	04	27562	62.0	0.36 J		0.70 J	0.124	0.124		
E08	34	04	27563	63.0	0.32 J		1.89			<100	
E08	34	04	27564	64.0	0.50 J	0.212	0.138	0.0027 U	0.0027 U	0.47 J	0.072 J
E08	34	05	28751	1.0	0.71		5.94 J			<100	
E08	34	05	28752	2.0	0.87		6.99 J				
E08	34	05	28755	3.0	0.80		7.10 J			<100	
E08	34	05	28800	4.0	0.39 J		1.12 J				
E08	34	05	28863	5.0	0.65 J		5.08			<100	
F08	34	03	29838	2.0	0.42		2.79				
F08	34	03	29839	3.0	0.33		1.37 J			<100	
F08	34	03	29840	4.0	0.30		1.17				
F08	34	03	29841	5.0	0.89		1.72 J			<100	
F08	34	03	29844	7.0	0.54		1.69			<100	
F08	34	03	29845	8.0	0.35		0.47				
F08	34	03	29846	9.0	0.33		1.33 J			<100	
F08	34	03	29856	10.0	0.09		1.12 J				
F08	34	03	29857	11.0	0.28		1.52 J			<100	
F08	34	03	29860	12.0	0.34		1.93 J				
F08	34	03	29861	13.0	0.30		0.65 J			<100	
F08	34	03	29863	14.0	0.26		0.27				
F08	34	03	29864	15.0	0.19		0.33			<100	
F08	34	03	29865	16.0	0.33		1.50				
F08	34	03	29866	17.0	0.20		0.90 J			<100	
F08	34	03	29873	18.0	0.29		0.49				
F08	34	03	29874	19.0	0.28		1.50			<100	

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)	Be (mg/kg)
F08	34	03	29875	20.0	0.46		1.67 J				
F08	34	03	29876	21.0	0.27		0.96 J			<100	
F08	34	03	29879	22.0	0.27		1.29 J				
F08	34	03	29880	23.0	0.28		0.82 J			<100	
F08	34	03	29884	24.0	0.36		1.11 J				
F08	34	03	29885	25.0	0.31		0.53			<100	
F08	34	03	29886	26.0	0.25		0.81 J				
F08	34	03	29887	27.0	0.30		0.93 J			<100	
F08	34	03	29888	28.0	0.22		1.21				
F08	34	03	29889	29.0	0.22		0.48			<100	
F08	34	03	29890	30.0	0.140	0.117	0.084 J	0.0025 U	0.0025 UJ	2.1 J	1.0
I06	21	01	19179	3.0	NS		NS			<100	
I06	21	01	19187	5.0	0.80		6.43			<100	
I06	21	01	19188	7.0	1.23		33.35			<100	
I06	21	01	19197	9.0	0.85		35.34			<100	
I06	21	01	19200	11.0	0.90		39.73			<100	
I06	21	01	19201	12.0	0.65		35.82				
I06	21	01	19202	13.0	1.09		45.44			<100	
I06	21	01	19207	15.0	1.08		46.15			43.3 J	
I06	21	01	19221	16.0	20.5	6.12	82	1600	40000 J	125 J	0.86 U
I06	21	01	19222	19.0	3.35		11.49	33.412	1344.44 J	<100	
I06	21	01	19227	21.0	0.75		5.69	0.117	0.337	<100	
I06	21	01	19240	22.0	NS		NS	0.113	0.219		
I06	21	01	19239	23.0	0.78		5.27 J			<100	
I06	21	01	19261	25.0	0.50		4.33				
I06	21	01	19265	26.0	0.53		1.15				
I06	21	01	19266	27.0	1.16		16.82 J				
I06	21	01	19278	29.0	0.34		1.17				
I06	21	01	19279	30.0	0.250	7.27	4.74	0.0026 U	0.0026 R	2.4 J	0.51 U
I06	21	02	19588	1.0	0.77		7.18 J			<100	
I06	21	02	19589	2.0	0.84		4.74 J				
I06	21	02	19590	3.0	1.40 J		1.51			<100	
I06	21	02	19599	4.0	0.40		2.50 J				
I06	21	02	19600	5.0	0.37		1.07 J			<100	
I06	21	02	19605	6.0	0.35		0.96 J				
I06	21	02	19606	7.0	0.56		2.35 J			<100	
I06	21	02	19611	8.0	0.77		4.00				
I06	21	02	19612	9.0	0.36		1.22 J			<100	
I06	21	02	19613	10.0	0.29		2.49 J				
I06	21	02	19614	11.0	0.32		1.61 J			<100	
I06	21	02	19616	12.0	0.30 J		2.21				
I06	21	02	19617	13.0	0.43 J		0.80			<100	
I06	21	02	19618	14.0	0.22		7.63 J				
I06	21	02	19619	15.0	0.30		9.07 J			<100	
I06	21	02	19620	16.0	0.22		9.73				
I06	21	02	19621	17.0	0.51 J		14.93			<100	
I06	21	02	19622	18.0	0.41		7.88 J				
I06	21	02	19623	19.0	0.20		8.37 J			<100	
I06	21	02	19624	21.0	0.42		15.16			<100	
I06	21	02	19625	22.0	0.45 J		8.24				
I06	21	02	19626	23.0	0.34		9.36			<100	
I06	21	02	19627	25.0	0.04 UJ		10.85			<100	
I06	21	02	19628	26.0	0.27		11.38				

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
I06	21	02	19629	27.0	0.06 UJ		13.78			<100	
I06	21	02	19637	28.0	0.32 J		15.68				
I06	21	02	19638	29.0	0.15		9.09			<100	
I06	21	02	19641	30.0	0.132	6.58	5.97	0.0026 U	0.0026 U	1.6 J	0.089 J
I06	21	03	19315	2.0	1.00		16.87 J				
I06	21	03	19316	3.0	1.15		14.63			<100	
I06	21	03	19335	4.0	0.50		11.59				
I06	21	03	19336	5.0	0.10		11.55			<100	
I06	21	03	19342	6.0	0.33		1.91 J				
I06	21	03	19343	7.0	0.55		2.65			<100	
I06	21	03	19348	9.0	0.90		3.49			<100	
I06	21	03	19354	11.0	0.30		2.96			<100	
I06	21	03	19359	12.0	0.36		4.41				
I06	21	03	19360	13.0	0.30		3.87			<100	
I06	21	03	19365	15.0	1.00		10.93			<100	
I06	21	03	19371	16.0	1.30		11.77				
I06	21	03	19372	17.0	2.44		14.97			<100	
I06	21	03	19379	18.0	1.40		9.13				
I06	21	03	19380	19.0	1.40		3.47			<100	
I06	21	03	19384	20.0	1.36		5.37				
I06	21	03	19385	21.0	0.85		0.97			<100	
I06	21	03	19390	22.0	1.10		10.74				
I06	21	03	19391	23.0	0.99		7.34			<100	
I06	21	03	19407	25.0	0.88		14.70			<100	
I06	21	03	19408	26.0	0.92		17.11				
I06	21	03	19409	27.0	0.98		22.38			<100	
I06	21	03	19420	28.0	0.68		13.89				
I06	21	03	19421	29.0	0.46		17.87			<100	
I06	21	03	19422	30.0	0.63	22.3	13.9	0.0026 U	0.0026 R	2.2 J	0.12 J
I06	21	04	19497	3.0	1.45		9.54			<100	
I06	21	04	19502	5.0	0.53		1.49			<100	
I06	21	04	19503	6.0	0.51		2.75				
I06	21	04	19504	7.0	0.69		6.53			<100	
I06	21	04	19514	9.0	0.34		1.04 J			<100	
I06	21	04	19520	11.0	0.27		3.18			<100	
I06	21	04	19521	12.0	0.20		0.49				
I06	21	04	19522	13.0	0.48		4.07			<100	
I06	21	04	19525	15.0	0.71		3.76			<100	
I06	21	04	19526	16.0	0.78		6.14				
I06	21	04	19529	17.0	1.62		6.44			<100	
I06	21	04	19530	19.0	1.01		6.18			<100	
I06	21	04	19528	21.0	0.72		5.80			<100	
I06	21	04	19531	22.0	0.79		2.49				
I06	21	04	19532	23.0	1.10		3.97			<100	
I06	21	04	19538	25.0	0.99		5.30			<100	
I06	21	04	19539	26.0	1.22 J		3.18				
I06	21	04	19540	27.0	2.77		5.01			<100	
I06	21	04	19541	28.0	1.25		3.96 J				
I06	21	04	19542	29.0	1.12		4.81 J			<100	
I06	21	04	19578	30.0	0.62	13.4	8.07	0.0026 U	0.0026 U	1.3 J	0.51 U
I06	21	05	19692	2.0	1.01		18.35				
I06	21	05	19693	3.0	0.77		9.66			<100	
I06	21	05	19694	4.0	0.76		11.93				

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
106	21	05	19695	5.0	2.97		27.44			<100	
106	21	05	19696	7.0	2.74		46.94			<100	
106	21	05	19697	9.0	0.93		15.38			<100	
106	21	05	19698	10.0	2.33		59.20				
106	21	05	19699	11.0	3.22		33.89			<100	
106	21	05	19703	13.0	NS		NS			<100	
106	21	05	19704	14.0	0.90		3.75				
106	21	05	19705	15.0	1.58		7.06			<100	
106	21	05	19706	16.0	1.54		16.18				
106	21	05	19707	17.0	1.14		9.20			<100	
106	21	05	19721	18.0	0.86		7.55				
106	21	05	19722	19.0	1.04		13.45			<100	
106	21	05	19723	21.0	1.00		6.97			<100	
106	21	05	19728	22.0	1.04		7.08				
106	21	05	19729	23.0	1.14		4.02			<100	
106	21	05	19737	24.0	1.27		3.99				
106	21	05	19738	25.0	0.98		1.55			<100	
106	21	05	19747	26.0	1.89		4.04				
106	21	05	19748	27.0	2.45		3.79			<100	
106	21	05	19753	28.0	1.33		3.86				
106	21	05	19754	29.0	1.65		2.33			<100	
106	21	05	19768	30.0	0.150	0.166	0.147	0.0025 U	0.0025 U	1.8 J	0.51 U
106	21	06	20602	1.0	0.82		5.64 J			<100	
106	21	06	20603	2.0	0.93		2.08				
106	21	06	20604	3.0	1.02		2.43			<100	
106	21	06	20605	5.0	0.42		14.28			<100	
106	21	06	20607	6.0	0.37		11.39				
106	21	06	20608	7.0	0.53		16.60			<100	
106	21	06	20614	8.0	1.07		13.41				
106	21	06	20615	9.0	0.50		3.36 J			<100	
106	21	06	20623	11.0	0.41		1.20 J			<100	
106	21	06	20624	13.0	0.27		2.84			<100	
106	21	06	20652	15.0	0.36		1.34 J			<100	
106	21	06	20653	16.0	0.32		3.17 J				
106	21	06	20654	17.0	0.34		3.82			<100	
106	21	06	20661	19.0	0.29		1.27 J			<100	
106	21	06	20662	21.0	0.27		1.89			<100	
106	21	06	20678	22.0	0.17		1.09 J				
106	21	06	20679	23.0	0.25		0.62 J			<100	
106	21	06	20684	25.0	0.02		0.48 J			<100	
106	21	06	20685	26.0	0.02		0.79 J				
106	21	06	20686	27.0	0.23		0.51			<100	
106	21	06	20689	29.0	0.04		0.36 J			<100	
106	21	06	20700	30.0	0.137	0.097 J	0.137	0.0025 U	0.0025 U	1.6 J	0.14 J
106	21	07	20709	1.0	0.60		1.20			<100	
106	21	07	20711	2.0	1.25		8.38				
106	21	07	20712	3.0	0.88		3.16			<100	
106	21	07	20713	5.0	0.41		1.56			<100	
106	21	07	20719	6.0	0.60		1.93				
106	21	07	20720	7.0	0.49		1.51			43.1 J	
106	21	07	20731	9.0	0.77		0.85 J			<100	
106	21	07	20732	11.0	0.29		2.57			<100	
106	21	07	20751	13.0	0.05		0.58			<100	

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
106	21	07	20758	15.0	0.27		1.10			<100	
106	21	07	20762	16.0	0.25		0.96 J				
106	21	07	20763	17.0	0.31		0.77 J			<100	
106	21	07	20771	19.0	0.21		1.43			<100	
106	21	07	20772	21.0	0.25		0.60 J			<100	
106	21	07	20780	22.0	0.22		1.42 J				
106	21	07	20781	23.0	0.29		0.90			<100	
106	21	07	20791	25.0	0.24		1.59			<100	
106	21	07	20792	26.0	0.30		3.97				
106	21	07	20793	27.0	0.26		8.07			<100	
106	21	07	20804	29.0	0.27		1.61			<100	
106	21	07	20813	30.0	0.195	6.48 J	7.06 J	0.0025 U	0.0025 U	2.6 J	0.32 J
106	21	08	20400	1.0	0.99		6.81			<100	
106	21	08	20401	3.0	0.98		1.66 J			<100	
106	21	08	20414	5.0	0.54 J		1.08 J			<100	
106	21	08	20427	7.0	0.91		1.42 J			<100	
106	21	08	20428	9.0	0.51		3.55			<100	
106	21	08	20434	11.0	0.35		0.96 J			<100	
106	21	08	20435	12.0	0.29		0.62				
106	21	08	20436	13.0	0.33		0.70 J			<100	
106	21	08	20442	15.0	0.34		1.27 J			<100	
106	21	08	20443	16.0	0.29		1.40				
106	21	08	20444	17.0	0.37		1.58 J			<100	
106	21	08	20448	19.0	0.25		5.96			<100	
106	21	08	20454	21.0	0.31		10.58			<100	
106	21	08	20455	22.0	0.20		5.32				
106	21	08	20456	23.0	0.28		10.16			<100	
106	21	08	20475	25.0	0.07		8.76			42.7 J	
106	21	08	20476	26.0	0.30		7.80				
106	21	08	20477	27.0	0.29		9.51			<100	
106	21	08	20490	29.0	0.23		10.70			<100	
106	21	08	20500	30.0	0.124	6.06	5.91	0.0025 U	0.0025 U	0.85 J	0.049 J
106	21	09	20534	1.0	0.53		2.11			<100	
106	21	09	20535	2.0	1.41		4.63				
106	21	09	20536	3.0	1.45		2.52			<100	
106	21	09	20537	5.0	0.42		0.96 J			41.9 J	
106	21	09	20545	6.0	0.67		1.35 J				
106	21	09	20546	7.0	0.59		3.18			<100	
106	21	09	20553	9.0	1.22		3.04			<100	
106	21	09	20554	11.0	0.26		0.94 J			<100	
106	21	09	20555	12.0	0.41		0.53				
106	21	09	20556	13.0	0.28		0.68 J			55.2 J	
106	21	09	20561	14.0	0.09		1.79				
106	21	09	20562	15.0	0.29		0.71 J			<100	
106	21	09	20563	16.0	0.34		1.09				
106	21	09	20564	17.0	0.35		1.21			<100	
106	21	09	20565	19.0	0.20		1.42 J			<100	
106	21	09	20566	21.0	0.36		2.27			<100	
106	21	09	20569	22.0	0.33		3.48				
106	21	09	20570	23.0	0.31		2.14			<100	
106	21	09	20578	25.0	0.23		1.47			<100	
106	21	09	20587	27.0	0.20		0.24			42.8 J	
106	21	09	20590	29.0	0.28		1.73			<100	

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
I06	21	09	20595	30.0	0.120	0.68	0.58	0.0026 U	0.0026 U	1.7 J	0.11 J
I06	21	13	20294	1.0	0.93		8.02			<100	
I06	21	13	20297	2.0	0.93		14.35				
I06	21	13	20298	3.0	0.68		0.70 J			<100	
I06	21	13	20302	4.0	0.38		1.29				
I06	21	13	20303	5.0	0.71 J		1.70 J			<100	
I06	21	13	20304	7.0	0.08		0.69 J			<100	
I06	21	13	20305	8.0	0.90		2.15 J				
I06	21	13	20306	9.0	0.59 J		0.63			<100	
I06	21	13	20307	11.0	0.26		0.82			<100	
I06	21	13	20309	12.0	0.42		0.91 J				
I06	21	13	20310	13.0	0.08 UJ		0.58			<100	
I06	21	13	20337	15.0	0.29 J		2.03			<100	
I06	21	13	20338	16.0	0.50		1.45 J				
I06	21	13	20339	17.0	0.21 J		1.02 J			<100	
I06	21	13	20340	19.0	0.31		1.42			<100	
I06	21	13	20354	21.0	0.28 J		0.95			<100	
I06	21	13	20355	22.0	0.26		1.04				
I06	21	13	20356	23.0	0.33		1.00 J			<100	
I06	21	13	20360	25.0	0.27		1.29 J			<100	
I06	21	13	20369	26.0	0.26 J		1.17 J				
I06	21	13	20370	27.0	0.18		1.84			<100	
I06	21	13	20378	29.0	0.22		1.21			<100	
I06	21	13	20385	30.0	0.144	0.165	0.202	0.0026 U	0.0026 U	3.2 J	0.17 J
L05	20	01	19775	1.0	0.76 J		13.54			332	
L05	20	01	19776	2.0	0.85		0.72				
L05	20	01	19777	3.0	1.32 J		1.38 J			<100	
L05	20	01	19785	4.0	0.52 J		1.38 J				
L05	20	01	19782	5.0	0.37 J		1.37 J			<100	
L05	20	01	19783	6.0	0.42 J		1.76 J				
L05	20	01	19784	7.0	0.60 J		1.66			<100	
L05	20	01	19797	9.0	0.34 J		0.66 J			<100	
L05	20	01	19798	11.0	0.18 J		0.64 J			<100	
L05	20	01	19799	13.0	0.33 J		0.50			<100	
L05	20	01	19840	15.0	0.28 J		0.78 J			<100	
L05	20	01	19841	17.0	0.26 J		0.39			<100	
L05	20	01	19842	18.0	0.06 UJ		0.55 J				
L05	20	01	19843	19.0	0.31 J		0.92			<100	
L05	20	01	19844	20.0	0.33 J		1.51 J				
L05	20	01	19845	21.0	0.18 J		0.75 J			<100	
L05	20	01	19848	22.0	0.29 J		1.27 J				
L05	20	01	19849	23.0	0.30 J		1.40			<100	
L05	20	01	19862	25.0	0.06 UJ		0.49 J			<100	
L05	20	01	19861	26.0	0.18 J		0.79 J				
L05	20	01	19863	27.0	0.20 J		0.55 J			2.8 J	
L05	20	01	19877	29.0	0.05 UJ		0.29			<100	
L05	20	01	19882	30.0	0.101	0.135	0.158	0.0026 U	0.0026 U	2.5 J	0.28 J
L05	20	02	19906	1.0	1.10		4.56 J			205	
L05	20	02	19907	2.0	1.03 J		3.83				
L05	20	02	19908	3.0	1.75 J		2.06 J			<100	
L05	20	02	19911	4.0	1.61		3.01 J	0.093	0.132		
L05	20	02	19912	5.0	0.99 J		3.15			<100	
L05	20	02	19913	6.0	0.54 J		1.60 J				

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)	Be (mg/kg)
L05	20	02	19914	7.0	0.65		0.81 UJ			<100	
L05	20	02	19916	9.0	0.42 J		0.81 J			42.3 J	
L05	20	02	19919	11.0	NS		NS			<100	
L05	20	02	19920	13.0	0.45		0.45 UJ			<100	
L05	20	02	19921	15.0	0.31		0.70 J			<100	
L05	20	02	19922	16.0	0.39		1.51 J				
L05	20	02	19923	17.0	0.48		1.77			<100	
L05	20	02	19937	19.0	0.28		1.24			<100	
L05	20	02	19938	21.0	0.33 J		1.06 J			<100	
L05	20	02	19939	22.0	0.05		0.40 J				
L05	20	02	19940	23.0	0.07		0.61 J			<100	
L05	20	02	19951	25.0	0.24 J		1.49			<100	
L05	20	02	19952	26.0	0.28		0.61 J				
L05	20	02	19953	27.0	0.20		0.94 J			<100	
L05	20	02	19964	29.0	0.34 J		1.31 J			<100	
L05	20	02	19974	30.0	0.145	0.153	0.155	0.0026 U	0.00035 J	2.6 J	0.27 J
L05	20	03	20045	1.0	0.76		14.02			85.2 J	
L05	20	03	20046	2.0	0.66		7.98				
L05	20	03	20047	3.0	1.08		6.86			<100	
L05	20	03	20063	4.0	0.37		2.04				
L05	20	03	20064	5.0	0.96		2.73 J			<100	
L05	20	03	20065	6.0	0.54		1.96 J				
L05	20	03	20066	7.0	0.59		1.90 J			<100	
L05	20	03	20072	9.0	0.42		2.19			<100	
L05	20	03	20076	11.0	0.43		0.96 J			<100	
L05	20	03	20079	13.0	0.49		1.15 J			<100	
L05	20	03	20087	15.0	0.27		0.54 J			<100	
L05	20	03	20088	16.0	0.41		0.88 J				
L05	20	03	20089	17.0	0.27		2.16 J			<100	
L05	20	03	20092	19.0	0.32		2.17 J			<100	
L05	20	03	20101	21.0	0.19		1.12 J			<100	
L05	20	03	20102	22.0	0.24		1.77 J				
L05	20	03	20103	23.0	0.30		0.51 J			<100	
L05	20	03	20110	25.0	0.37		1.30 J			<100	
L05	20	03	20111	26.0	0.26		0.67				
L05	20	03	20112	27.0	0.23		0.43 J			<100	
L05	20	03	20121	29.0	0.24		1.27			<100	
L05	20	03	20126	30.0	0.166	0.161	0.154	0.0026 U	0.0026 U	1.8 J	0.51 U
L05	20	04	20133	1.0	0.92		12.75			1105 J	
L05	20	04	20134	2.0	NS		NS	0.088	0.482		
L05	20	04	20135	3.0	1.02		7.06			<100	
L05	20	04	20136	5.0	0.43		0.66 J			<100	
L05	20	04	20144	7.0	0.98		1.14 J			<100	
L05	20	04	20145	9.0	0.50		1.82			<100	
L05	20	04	20146	11.0	0.39		1.64 J			<100	
L05	20	04	20147	12.0	0.36		0.68 J				
L05	20	04	20148	13.0	0.24		0.44 J			<100	
L05	20	04	20149	15.0	0.20		0.23			<100	
L05	20	04	20159	16.0	0.28		1.20				
L05	20	04	20160	17.0	0.31		1.03 J			<100	
L05	20	04	20161	19.0	0.09		0.82 J			<100	
L05	20	04	20165	21.0	0.40		0.71 J			<100	
L05	20	04	20168	22.0	0.29		0.22 UJ				

Table 3
LPH Soil Boring Sample Results

Subcell	LPH	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	NP (mg/kg)	Be (mg/kg)
L05	20	04	20169	23.0	0.27		1.00 J			<100	
L05	20	04	20172	25.0	0.24		0.56 J			<100	
L05	20	04	20179	26.0	0.24		1.24				
L05	20	04	20180	27.0	0.17		1.33 J			<100	
L05	20	04	20181	29.0	0.16		0.68 J			<100	
L05	20	04	20182	30.0	0.141	0.159	0.124	0.0026 U	0.0026 U	2.1 J	0.16 J
L05	20	05	19978	1.0	1.07		40.07 J			201	
L05	20	05	19979	2.0	0.64 J		0.73	0.098	0.098		
L05	20	05	19980	3.0	1.17 J		2.19			<100	
L05	20	05	19981	5.0	0.63		1.00 J			<100	
L05	20	05	19982	6.0	0.59		2.99 J				
L05	20	05	19983	7.0	0.49		1.24 J			<100	
L05	20	05	19997	8.0	0.76 J		1.01 J				
L05	20	05	19998	9.0	0.38		1.33 J			<100	
L05	20	05	19999	11.0	0.26		0.69 J			<100	
L05	20	05	20000	13.0	0.62		0.85			<100	
L05	20	05	20007	15.0	0.37		0.57			<100	
L05	20	05	20008	16.0	0.32		0.48				
L05	20	05	20009	17.0	0.21		0.61 J			<100	
L05	20	05	20010	19.0	0.20		0.69 J			<100	
L05	20	05	20019	21.0	0.41		1.52			<100	
L05	20	05	20020	22.0	0.28		1.84				
L05	20	05	20021	23.0	0.26		1.18 J			<100	
L05	20	05	20026	25.0	0.28		1.51			<100	
L05	20	05	20027	26.0	0.19		0.47				
L05	20	05	20028	27.0	0.31		0.62 J			<100	
L05	20	05	20035	29.0	0.41		1.21			<100	
L05	20	05	20041	30.0	0.161	0.147	0.182	0.0026 U	0.0026 U	2.8 J	0.33 J

Table 3
LPH Soil Boring Sample Results

Analytes:

Th-232 - Thorium-232	PCE - Tetrachloroethene
U-234 - Uranium-234	Ni - Nickel
U-238 - Uranium-238	Be - Beryllium
TCE - Trichloroethene	

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

R - Validation qualifier used to indicate that the result is considered unusable.
U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Figure 3 for boring locations.

DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

DL sample is analyzed on Site for Ni using x-ray fluorescence spectroscopy by Stone Environmental Inc. Ni result that is between the detection limit of 40 mg/kg and the reporting limit of 100 mg/kg is estimated. Ni result that is less than the detection limit of 40 mg/kg is reported as less than the reporting limit (<100 mg/kg).

DL sample is analyzed for volatile organic compounds (TCE and PCE) using solid phase microextraction and capillary gas chromatography by Stone Environmental Inc.

SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc

NS - Not sampled due to insufficient recovery.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.

 : Result is above Site cleanup level.

FIGURES

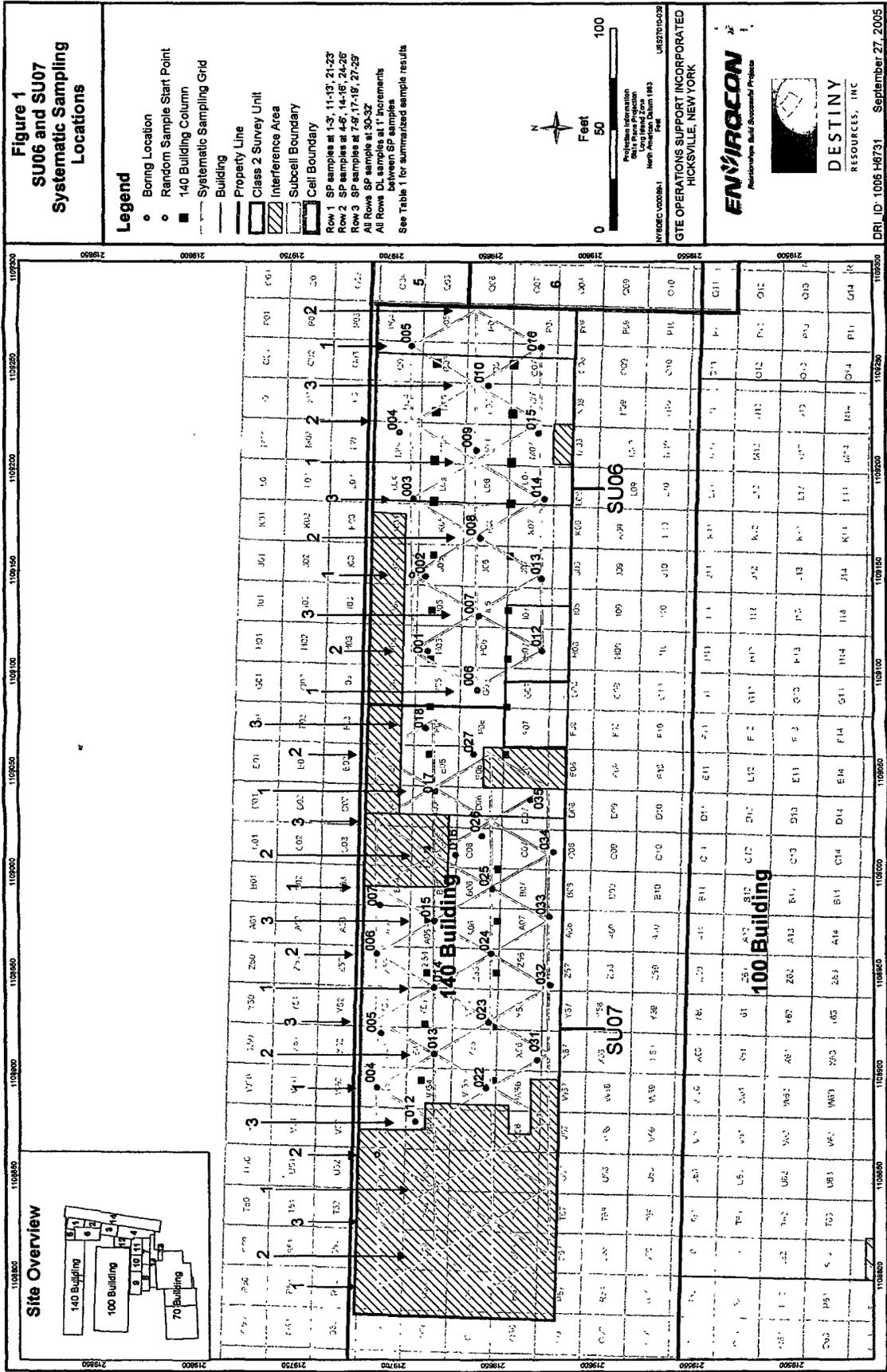


Figure 1
SU06 and SU07
Systematic Sampling
Locations

- Legend**
- Boring Location
 - Random Sample Start Point
 - 140 Building Column
 - Systematic Sampling Grid
 - ▭ Building
 - ▭ Property Line
 - ▭ Class 2 Survey Unit
 - ▭ Interference Area
 - ▭ Subcell Boundary
 - ▭ Cell Boundary
- Row 1 SP samples at 1-3', 11-13', 21-23'
 Row 2 SP samples at 4-6', 14-16', 24-26'
 Row 3 SP samples at 7-9', 17-19', 27-29'
 All Rows SP samples at 30-32'
 All Rows DL samples at 1' increments
 between SP samples
 See Table 1 for summarized sample results



HYDROLOGICAL
 PROFESSIONAL INFORMATION
 Soil Erosion Prediction
 North American Datum 1983
 Unit: Feet
 URS
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

ENVIROCON
 Restoration Build Successful Problem

DESTINY
 RESOURCES, INC

DRI_ID: 1006-H8731 September 27, 2005

Figure 2
Intervals, Increments and Analyses for Samples

	Row 1			Row 2			Row 3		
SU Interval 1	0	--	No sample	0	--	No sample	0	--	No sample
	1	DL	Rad	1	DL	Rad	1	DL	Rad
	2	DL	Rad	2	DL	Rad	2	DL	Rad & Nickel
	3	DL	Rad & Nickel	3	DL	Rad & Nickel	3	DL	Rad
	4	DL	Rad	4	DL	Rad	4	DL	Rad & Nickel
	5	DL	Rad & Nickel	5	DL	Rad & Nickel	5	DL	Rad
	6	DL	Rad	6	DL	Rad	6	DL	Rad & Nickel
	7	DL	Rad & Nickel	7	DL	Rad & Nickel	7	DL	Rad & Nickel
	8	DL	Rad	8	DL	Rad	8	DL	Rad
	9	DL	Rad & Nickel	9	DL	Rad & Nickel	9	DL	Rad
SU Interval 2	10	DL	Rad & Nickel	10	DL	Rad	10	DL	Rad & Nickel
	11	DL	Rad	11	DL	Rad & Nickel	11	DL	Rad
	12	DL	Rad	12	DL	Rad	12	DL	Rad & Nickel
	13	DL	Rad & Nickel	13	DL	Rad & Nickel	13	DL	Rad
	14	DL	Rad	14	DL	Rad	14	DL	Rad & Nickel
	15	DL	Rad & Nickel	15	DL	Rad & Nickel	15	DL	Rad
	16	DL	Rad	16	DL	Rad	16	DL	Rad & Nickel
	17	DL	Rad & Nickel	17	DL	Rad & Nickel	17	DL	Rad & Nickel
	18	DL	Rad	18	DL	Rad	18	DL	Rad
	19	DL	Rad & Nickel	19	DL	Rad & Nickel	19	DL	Rad
SU Interval 3	20	DL	Rad	20	DL	Rad	20	DL	Rad & Nickel
	21	DL	Rad & Nickel	21	DL	Rad & Nickel	21	DL	Rad
	22	DL	Rad	22	DL	Rad	22	DL	Rad & Nickel
	23	DL	Rad & Nickel	23	DL	Rad & Nickel	23	DL	Rad
	24	DL	Rad	24	DL	Rad	24	DL	Rad & Nickel
	25	DL	Rad & Nickel	25	DL	Rad & Nickel	25	DL	Rad
	26	DL	Rad	26	DL	Rad	26	DL	Rad & Nickel
	27	DL	Rad & Nickel	27	DL	Rad & Nickel	27	DL	Rad & Nickel
	28	DL	Rad	28	DL	Rad	28	DL	Rad
	29	DL	Rad & Nickel	29	DL	Rad & Nickel	29	DL	Rad (1' spoon)
30	DL	Rad	30	DL	Rad	30	DL	Rad & Nickel	
31	DL	Rad & Nickel	31	DL	Rad & Nickel	31	DL	Rad & Nickel	
32	DL	Rad	32	DL	Rad	32	DL	Rad & Nickel	

Notes:

- Solid lines indicate the spoon increment (2')
- Zero indicates the ground surface
- Maximum depth at 30' bgs

Overview:

- Row 1 = SP's (1-3', 11-13', 21-23' and 30-32')
- Row 2 = SP's (4-6', 14-16', 24-26' and 30-32')
- Row 3 = SP's (7-9', 17-19', 27-29' and 30-32')
- All Rows = DL's at 1' increments between SP's

Analyses Intervals:

- SU Interval 01:
All SP samples from rows 1, 2 and 3 that were collected between 0 - 10' bgs
- SU Interval 02:
All SP samples from rows 1, 2 and 3 that were collected between 11 - 20' bgs
- SU Interval 03:
All SP samples from rows 1, 2 and 3 that were collected between 21 - 30' bgs

Figure 3
LPH Soil Boring
Sample Results

Legend

- Boring Location
- SU08 Boring Location
- Building
- Property Line
- Subcell Boundary
- Historic Leach Pool

See Table 3 for summarized sample results.
Note: Leach pool data provided by available historical maps



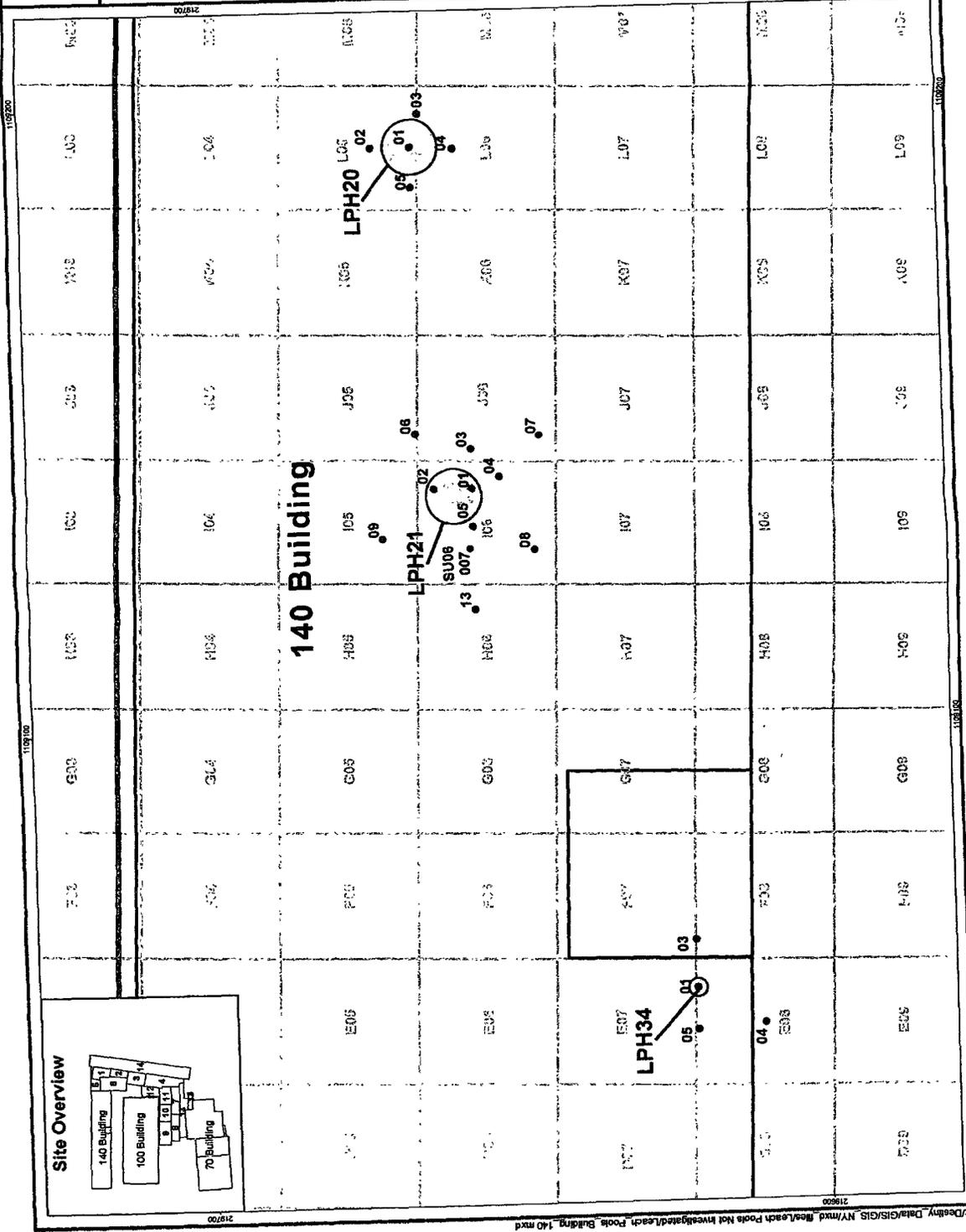
NYSDDC 100288-1
UR027016-039
UR027016-039
Projection: NAD83
Datum: North American Datum 1983
Zone: Long Island Zone
Units: Feet

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

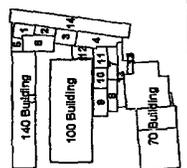


DESTINY
RESOURCES, INC

DRI ID: 1008.H8754 September 29, 2005



Site Overview



P:\Destiny_Data\GIS\GIS_NY\mxd_RealLeach_Pools Not Investigated\Leach_Pools_Building_140.mxd



**Systematic
Subsurface Soil Sampling and Analysis Plan
Beneath the 140 Building**

**Former Sylvania Electric Products Incorporated Facility
Hicksville, New York
GTE Operations Support Incorporated**

November 2004

This Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 140 Building has been reviewed by URS Corporation - New York, and I am in agreement with the methods and procedures to be used in this investigation.

URS Corporation - New York



Robert D. Brathvode, P.E.
Engineer of Record

This Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 140 Building has been reviewed by Professional Radiation Consulting, Inc. (PRCI) in accordance with Envirocon's New York State Department of Labor Radioactive Materials License No. 3095-4330, and I am in agreement with the methods and procedures to be used in this investigation.

S. Brightwell, CHP for Shane Brightwell

Shane Brightwell, CHP
President, PRCI
RSO, Radioactive Materials License No. 3095-4330

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	OBJECTIVE	1
3.0	APPLICABLE GUIDANCE	1
4.0	CHARACTERIZATION.....	2
4.1	RADIOLOGICAL	2
4.1.1	<i>Applicable Radiological Guidance</i>	2
4.1.2	<i>Survey Unit</i>	2
4.1.3	<i>Sample Locations</i>	3
4.2	CHEMICAL.....	5
4.3	MATERIALS AND METHODS.....	5
4.3.1	<i>Soil Sampling Equipment</i>	5
4.3.2	<i>Sample Field Screening and Preparation</i>	6
4.3.3	<i>Sample Collection</i>	6
4.3.4	<i>Sample Analysis</i>	6
5.0	SAMPLING/ANALYSIS PROCEDURE	7
6.0	TARGET CONCENTRATIONS	8
7.0	ASSESSMENT.....	8
7.1	RADIOLOGICAL	8
7.1.1	<i>Survey Unit Assessment</i>	8
7.1.2	<i>Decision Analysis</i>	9
7.2	CHEMICAL.....	9
8.0	SCHEDULE.....	9

FIGURES

Figure 1 – Survey Units Beneath the 140 Building

1.0 INTRODUCTION

This Systematic "Subsurface Soil Sampling and Analysis Plan" (SSSAP) has been prepared to characterize the soils in accessible areas beneath the 140 Building. This SSSAP describes applicable guidance, characterization (i.e., survey, design and sampling protocols), and laboratory analysis for the soils. The results of this SSSAP will enable GTE Operations Support Incorporated (GTEOSI) to determine the extent to which remedial activities are necessary beneath the 140 Building.

During the last two years, soils containing residual radionuclides of uranium (U) and thorium (Th) were excavated from the Former Sylvania Electric Products Incorporated (Sylvania) property in Hicksville, New York (the Site) and shipped off Site to an approved disposal facility. To date, remediation activities at the Site have focused primarily on the eastern portions of the 100 and 140 Properties. This eastern focus has been based on what is known regarding historical Sylvania facilities and operations, and findings of previous Site investigations.

Subsurface investigation was performed under the eastern portion of the 140 Building, which identified target analytes exceeding the cleanup criteria. Consequently, approximately 5,000 square feet (ft²) of the eastern end of the 140 Building was razed to accommodate remediation. The remaining warehouse portion of the building footprint (approximately 49,000 ft²) is the subject of this Plan.

The various sections of this SSSAP present the steps to be implemented to characterize the subsurface soils in the areas below the 140 Building. The characterization will include not only radionuclides, but also certain volatile organic compounds (VOCs) [(tetrachloroethene (PCE) and trichloroethene (TCE)] and nickel (Ni) (collectively, "target analytes"). Modification to these steps will be permitted when field conditions or sample results indicate the modifications would better support the intent and objective of this SSSAP as stated in Section 2.0 below. All modifications to steps in this Plan shall be made with the prior concurrence of the Radiation Safety Officer (or his designated alternate) and the prior approval of the Project Coordinator.

2.0 OBJECTIVE

The objective of this Plan is the characterization of soils in specified areas as shown in Figure 1. For radiological characterization purposes, these areas are referred to as "survey units" (SUs) as defined in NUREG 1575, *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM).

Note: The area designated as SU06 is the approximate eastern one-third of the 140 Building. Within SU06, a small portion of the southern area (control point area) and a portion of the northwestern area (sample storage) of the survey unit are not readily accessible for characterization (i.e., building alterations or relocation of structures would be required). The area designated as SU07 lies to the west of SU06, and comprises slightly less than two-thirds of the 140 Building area. Portions of the southeastern (lunch room) and northeastern corners (sample prep & lab area and sample storage area) of the survey unit and most of the western portion (office area) of the survey unit are not readily accessible for characterization (Figure 1).

3.0 APPLICABLE GUIDANCE

This SSSAP was prepared in accordance with Voluntary Cleanup Agreement, Site V-00089-1, Index W1-0903-01-12, between New York State Department of Environmental Conservation (NYSDEC) and

GTEOSI. Field procedures and analytical methods identified in the Site's approved *Comprehensive Soil Remediation Work Plan, Revision 5: June 2003* (Work Plan) have been incorporated in this SSSAP where appropriate. Guidance specific to radiological and chemical characterization are described in their associated sections, as applicable.

4.0 CHARACTERIZATION

The soils within SU06 and SU07 are not expected to contain target analytes at concentrations greater than the applicable target cleanup levels. (Note: the target cleanup levels are defined in the Work Plan). The following sources were reviewed during preparation of this SSSAP:

- **Historic maps, aerial photos, and historic documents** - These sources indicate that one building in which uranium fuel element fabrication occurred during the 1950s and 1960s occupied most of the southeastern half of SU06 and a small building historically occupied the southeastern corner of SU07.
- **Soil borings performed within the SUs during previous investigations** - Three shallow borings conducted in SU06 did not indicate the presence of target analytes above cleanup levels.
- **Excavation in adjacent cells** - Field surveys and sampling on the west side of Cell 5 and Cell 6 indicated that target analytes above cleanup levels did not continue to the west beyond the cell boundaries into SU06.

The radiological characterization is designed using guidance provided in MARSSIM as discussed below (Section 4.1). Concurrently, VOCs and Ni soil residuals will be characterized as described in Section 4.2.

4.1 RADIOLOGICAL

The following sections describe the radiological guidance and sampling parameters to be used to execute this SSSAP. This SSSAP has been developed using a combination of applicable MARSSIM guidance, historic documents, and knowledge of Site subsurface conditions gained during investigations and remediation.

4.1.1 Applicable Radiological Guidance

The investigation of soils to determine the presence (if any), concentrations, extent, and boundaries of radionuclides is termed a *characterization* survey. The principles for a characterization survey described in Chapter 5 of MARSSIM have been considered in developing this SSSAP. Specific methods recommended in MARSSIM for subsurface soil sampling have also been incorporated in this SSSAP.

4.1.2 Survey Unit

Classification

Both SU06 and SU07 were designated as MARSSIM Class 2 SUs since they are not expected to exhibit soil target analytes at concentrations exceeding the cleanup levels. A systematic triangular sampling pattern will be used to provide uniform lateral coverage of these SUs. This triangular grid based system, as prescribed by MARSSIM for Class 2 SUs, is useful as it accommodates both the radiological and chemical sampling.

Layout

SU06 is approximately 1,800 square meters (m²) or 19,378 ft². Of this total area, 1,634 m² (17,586 ft²) are readily accessible for characterization. SU07 is approximately 2,760 m² (29,713 ft²). Of this total area, only 1,410 m² (15,179 ft²) are readily accessible for characterization. As indicated in Section 4.1.3, a triangular grid system will be used and nomenclature will be adopted from the Site grid system described below.

The Site is on a northing/easting planar grid coordinate system. The Site grid pattern was developed to accommodate excavation cells, and each cell is divided into subcells. Each subcell has a north-south length of 6.7 meters (m) or 22 feet (ft) and an east-west width of 6.1 m (20 ft). The subcells are uniquely identified by letter designations for north-south columns and number designations for east-west rows. This grid coordinate system will be used for defining the sample nomenclature within the SUs.

4.1.3 Sample Locations

Number of Horizontal Sample Locations

MARSSIM bases the number of samples (N) in a SU on how close the expected average concentration in the SU is to the cleanup level, how much variation there is in the observed or expected concentrations, and the sensitivity of equipment scanning capabilities with respect to the cleanup levels. For SU06 and SU07, the minimum number of samples to be collected in each SU is 13. Although MARSSIM indicates only 13 samples are sufficient, 16 sample locations per each SU were selected to provide lateral coverage and to ensure that the minimum number of 13 samples can be collected in the event field conditions do not allow collection of soil samples at all 16 locations. If sample locations fall outside the SU boundary due to the grid orientation, they may be relocated inside the grid using the criteria described in below.

Sample Start Point

MARSSIM suggests establishing a systematic sampling pattern using a random start point. A random number generator was used to select planar coordinates within the footprint of each of the SU boundaries. The associated systematic triangular sampling pattern, as described below, was established in each SU by placing one of the sample locations at the start point coordinates.

Horizontal Sample Locations

For each SU, once N, the SU size, the grid system pattern, and the start point were established, the sample locations were then selected and mapped. The calculated maximum east-west distance between sampling locations (L_N) and north-south distance between sampling rows (L'_N) are listed below.

Survey Unit	N (samples)	L_N (meters)	L'_N (meters)
SU06	16	10.86	9.40
SU07	16	10.09	8.74

Some of the sample locations may have to be modified to avoid obstructions encountered in the field (i.e., utilities). Any sample location that must be relocated up to one-third of the diagonal distance between planned sample locations [≤ 3.0 m (9.8 ft) in SU06 or ≤ 3.4 m (11.2 ft) in SU07] will be relocated accordingly. Any sample location that must be relocated a distance greater than the applicable distance

specified above will be either eliminated or randomly relocated using the method for generating random coordinates as described previously.

If a sample location falls just outside of the SU boundary, the sample may be evaluated for relocation to within the SU boundary, depending on the required distance and obstructions. The result may be that the SU has more than the minimum number of sampling locations in order to provide as uniform coverage as practical. The addition of sample points does not reduce the effectiveness of the methods described in MARSSIM.

Vertical Sampling Depth

Vertical sampling and excavation depths on Site have been measured in feet below ground surface (bgs); therefore, vertical units are expressed here in both meters and feet (in parentheses). Based on the results of subsurface soil investigations and excavations, most impacts occur from the surface down to about 7.3 m (24 ft) bgs, with infrequent impacts identified greater than 7.3 m (24 ft) bgs. Impacts below 7.3 m (24 ft) bgs were usually identified based on shallow indicators. Given this history, a target maximum sampling depth of approximately 9 m (30 ft) bgs has been established to provide an additional 2-m (6-ft) buffer and to accommodate the pattern of the vertical sampling intervals as described below. If exceedences of the cleanup objectives are encountered at 9 m (30 ft) bgs, additional sampling will continue to define the vertical extent of impacts.

Vertical Sample Intervals

Based on the results of excavation and subsurface soil investigations performed during remediation on Site, impacts may be present in relatively thin soil veins. Specifically, concentrations may increase from not detected to greater than the cleanup levels in the next lower 0.3-m (1-ft) interval. Within the same boring, the concentrations may then decrease rapidly over the next 0.3- or 0.6-m (1- or 2-ft) intervals. Note that the measured depths of the soil layers with elevated radiological impacts may vary due to both depositional nature of the impacts and the assumption that the surface is a uniform elevation (measured bgs).

Based on the above information, the following subsurface soil sampling parameters were established.

- Characterization/Final Verification samples will be collected at 3-m (10-ft) intervals. These samples will be collected, documented, labeled, and analyzed by on-Site and off-Site analytical methods as Sample Point (SP) samples. SP samples are treated the same as Confirmation/Verification (CF/VF) samples as described in the Work Plan.
- The SP sample pattern was established so that each sample at the corner of an equilateral triangle is vertically staggered by 1 m (3.3 ft). For example:
 1. The first triangle corner (#1) sampling location will have SP samples collected from the top 1-ft segment of the 1-, 4-, and 7-m (1-, 11-, and 21-ft) intervals;
 2. The second triangle corner (#2) sampling location will have SP samples collected from the top 1-ft segment of the 2-, 5-, and 8-m (4-, 14-, and 24-ft) intervals; and
 3. The third triangle corner (#3) sampling location will have SP samples collected from the top 1-ft segment of the 3-, 6-, and 9-m (7-, 17-, and 27-ft) intervals.

The staggered vertical sample pattern result for a single set of three adjacent sample locations resembles a triangular "staircase" or helical pattern. This pattern works as follows*:

- a) The sample locations in the westernmost north-south oriented column are all sampled at the intervals outlined in #1 above;
 - b) The sample locations in the second north-south oriented column to the east are all sampled at intervals outlined in #2 above;
 - c) The sample locations in the third north-south oriented column to the east are all sampled at the intervals outlined in #3 above;
 - d) The sample locations in the fourth north-south oriented column to the east are all sampled at the intervals outlined in #1 above;
 - e) The sample locations in the fifth north-south oriented column to the east are all sampled at the intervals outlined in #2 above; and.
 - f) The sample locations in the sixth north-south oriented column to the east are all sampled at the intervals outlined in #3 above.
- * The pattern repeats after every third column.
- The 0.3-m (1-ft) interval samples between the SP sample intervals will be collected and analyzed on Site as Delineation (DL) Samples. This will provide additional assurance that any relatively thin veins of impacts present between the SP interval samples will be identified.

4.2 CHEMICAL

As indicated in the introduction of this SSSAP, the potential for residual VOCs and Ni impacts in the SUs will be evaluated concurrently with the radiological impacts. The triangular grid system established under MARSSIM and the vertical interval sampling were evaluated for this purpose and accepted. This system provides both vertical and lateral coverage to adequately evaluate the potential for chemical impacts. If elevated concentrations of VOCs and/or Ni are detected, the soils around the location will be considered for additional investigation or remedial action, as appropriate.

4.3 MATERIALS AND METHODS

The following narrative describes the sample collection, analysis, and evaluation methodology to be used to execute this SSSAP.

4.3.1 Soil Sampling Equipment

A hollow-stem auger drill rig with split-spoon sampling capabilities will be used to collect soil samples. The split spoon [0.6 m (2 ft) in length and 0.08 m (3 inches) in diameter] will be advanced in 0.6-m (2-ft) intervals. Two, 0.3-m (1-ft) interval samples will be collected per split-spoon.

4.3.2 Sample Field Screening and Preparation

Each sample will be initially field-screened with a 3-inch sodium iodide (NaI) gamma detector to evaluate potential residual radiological impacts and a photoionization detector (PID) to evaluate the presence of VOCs. In addition, an x-ray fluorescence (XRF) spectrometer will be used on Site to screen samples for Ni. Sample descriptions and field observations will be documented on the boring logs.

4.3.3 Sample Collection

A minimum of two samples will be collected per split spoon barring loss or incomplete recovery. These samples will be designated as either DL or SP, as applicable. DL samples will be collected at the intervals between SP samples from the surface down to the bottom sampling depth of approximately 9 m (30 ft) bgs.

Samples collected for radiological analysis will be placed in 1-liter Marinelli containers. DL samples will be used for radiological screening and analyzed on Site using gamma spectroscopy. The SP samples will be analyzed for radionuclides on Site and off Site, consistent with the Work Plan criteria for CF/VF sampling.

Samples collected for chemical analysis will be placed in pre-preserved methanol vials and non-preserved 40-ml vials. DL samples are not analyzed for VOCs or Ni unless field screening/observations support collection of a chemical sample. DL samples with PID screening readings of 50 parts per million (ppm) or higher will be collected for VOC analysis by Severn Trent Laboratories (STL), Earth City, Missouri. The SP samples will be collected for VOCs both on Site and off Site, consistent with the Work Plan criteria for CF/VF sampling.

A geologist will describe the samples in general accordance with the Unified Soil Classification System (USCS). Sample descriptions will include soil type, color, moisture, and other visual observations and field readings. This information will be documented on soil boring logs.

All samples will be logged into the Site sample tracking and barcode system.

4.3.4 Sample Analysis

Each DL sample will be analyzed for 10 minutes by on-Site gamma spectroscopy (providing a nominal detection limit of approximately 0.014 pCi/g for Th-232 and 3.6 pCi/g for U-238, both of which are far below the Site cleanup levels) to quantify the concentrations of target radionuclides of U and Th. Each SP sample will be analyzed for 30 minutes by on-Site gamma spectroscopy (providing a nominal detection limit of approximately 0.008 pCi/g for Th-232 and 2.0 pCi/g for U-238, both of which are far below the Site cleanup levels) as well as by alpha spectroscopy at STL for isotopic U and Th.

If DL samples are collected for chemical analyses, they may be screened using XRF for Ni and analyzed for VOCs on Site by Stone Environmental. Each SP sample will be analyzed for VOCs on Site by Stone Environmental as well as by STL for VOCs and Ni. SP samples will also be analyzed for beryllium (Be).

5.0 SAMPLING/ANALYSIS PROCEDURE

The following is the step-by-step procedure for sample collection and subsequent analysis.

1. The applicable Chemical/Radiological Work Permit (C/RWP) and Activity Hazards Analysis (AHA) will be in place prior to commencement of sampling.
2. The field crew will be briefed on this procedure prior to commencement of sampling.
3. Each sampling location will be located and surveyed in the field using either a laser positioning system (LPS) or global positioning system (GPS) surveying system.
4. Each sample location will be investigated for utilities and obstructions prior to saw cutting any pavement or commencement of sampling. If a sample location is in an area where utilities or obstructions have been identified, then the sample location shall be adjusted to a safe, practical location as close to the proposed location as possible, but no more distant than 3.0 m (9.8 ft) in SU06 or 3.4 m (11.2 ft) in SU07. Any sample location that cannot be relocated within these criteria will be eliminated or randomly relocated per Section 4.1.3.
5. The split-spoon sampler will be advanced to the predetermined maximum depth range of approximately 9 m (30 ft) bgs, in 0.6-m (2-ft) intervals, collecting two, 0.3-m (1-ft) samples per sampling cycle.
6. Radiological field screening of samples will be conducted on each sample using a NaI gamma detector.
7. Chemical field screening of samples for VOCs will be conducted on each sample using a PID. An XRF spectrometer will be used for on-Site Ni screening of every other sample beginning with the second sample in the boring, continuing with the fourth sample, sixth sample, etc. Soil samples (~100 g) for Ni screening by XRF will be collected in Ziploc® bags if the soils are relatively dry and in glass jars if the moisture content is approximately 20% or higher. The samples will be delivered to Stone Environmental for either direct screening by XRF, or for drying in an oven, and then screening by XRF. For those DL quality control (QC) samples to be submitted to STL, the soils will be transferred from the Ziploc® bags to 40-ml glass vials in the sample preparation area. For QC purposes, every tenth sample will be screened by XRF and then submitted to STL for duplicate analysis. SP samples will be analyzed for Be.
8. A geologist will log the borings and record observations and measurements consistent with the USCS nomenclature and procedures, noting indications of soil impacts by chemicals and other potential contributors to contamination.
9. DL screening samples will be collected at the intervals between SP samples prescribed in Section 4.1.3. Radiological DL samples will be analyzed by on-Site gamma spectroscopy for a 10-minute count time. If field conditions warrant and chemical DL samples are collected, they will be analyzed for VOCs on Site by Stone Environmental. Chemical DL samples with PID readings of 50 ppm or greater will be submitted for analysis to STL.
10. SP samples will be collected at the intervals prescribed in Section 4.1.3 and will be treated in the same manner as CF/VF samples. Radiological SP samples will be analyzed by on-Site gamma spectroscopy for a 30-minute count time as well as off-Site isotopic analyses by STL. Chemical SP samples will be collected and placed in vials with methanol for on-Site analysis by

Stone Environmental and in 40-ml glass vials for submission to STL for analysis of VOCs, Ni, and Be.

11. If oily soils are encountered, they will be collected while sampling as either DL or SP samples. Pursuant to the NYSDEC request, these soils will be submitted to STL for analysis of polychlorinated biphenyls (PCBs) and semi-volatile organic compounds (SVOCs) base/neutral fraction. The soils collected for PCBs and SVOC analyses will be placed in 250-ml glass jars; a minimum of 100g is needed to accommodate both analyses. The containers for the other analyses will follow the instructions provided above. (If sufficient sample volume of oily soils is not available, the chemical analyses for VOCs, SVOCs, PCBs, Ni and Be will take precedence over samples for radiological analyses.
12. After the completion of sampling from a given location, the borehole will be backfilled with clean cuttings and/or clean on-site backfill material to within 0.1 to 0.15 m (4 to 6 inches) of the top of the borehole. The remaining 0.1 to 0.15 m (4 to 6 inches) will be filled with asphalt or other applicable surfacing material.
13. Decontamination of sampling equipment will be performed in accordance with SOP-RAD-011, *Equipment Decontamination* and in accordance with the chemical decontamination procedures.

6.0 TARGET CONCENTRATIONS

The soil concentrations will be compared to the Site cleanup levels as defined in the Work Plan.

7.0 ASSESSMENT

Currently, the SUs are beneath Building 140. As a result, performing surface radiation scans as surveys are not practical to detect the presence of surface or subsurface radiological impacts in excess of cleanup criteria. MARSSIM allows for modifications to the survey design to address subsurface soils. However, in order to classify SUs as non-impacted, or to facilitate remediation planning, subsurface characterization is required. In addition, the data quality objectives process also allows that, based on the data needs for a survey, the decision can be made that sampling and analysis are necessary.

7.1 RADIOLOGICAL

7.1.1 Survey Unit Assessment

Each SU will be characterized/verified vertically at 3-m (10-ft) staggered intervals. This approach for subsurface soils is not directly addressed in MARSSIM, which provides characterization and final verification guidance primarily on surface soils. Therefore, each 3-m (10-ft) depth interval will be evaluated independently as if that interval were representative of an undulating soil surface, using the MARSSIM approach to surface soils. The SP samples within each 3-m (10-ft) depth interval will be treated as if they were collected from a continuous varying surface that existed at their corresponding depths [i.e., all samples in the 0 to 3-m (0 to 10-ft) interval will be evaluated independently using a MARSSIM statistical test and all samples in the 3- to 6-m (10- to 20-ft) interval will be evaluated independently using the MARSSIM statistical test]. This approach will be used for each of the 3-m (10-ft) intervals.

7.1.2 Decision Analysis

The radiological analytical results will be evaluated using the default null hypothesis recommended in MARSSIM, which states: "The residual radioactivity in the survey unit exceeds the release criterion." The MARSSIM "Sign Test" (assuming no contribution from background radionuclides) will be used to reject the null hypothesis. When the null hypothesis is rejected, then the SU will pass and qualify for release. If the null hypothesis cannot be rejected, further investigation or remedial action may be necessary.

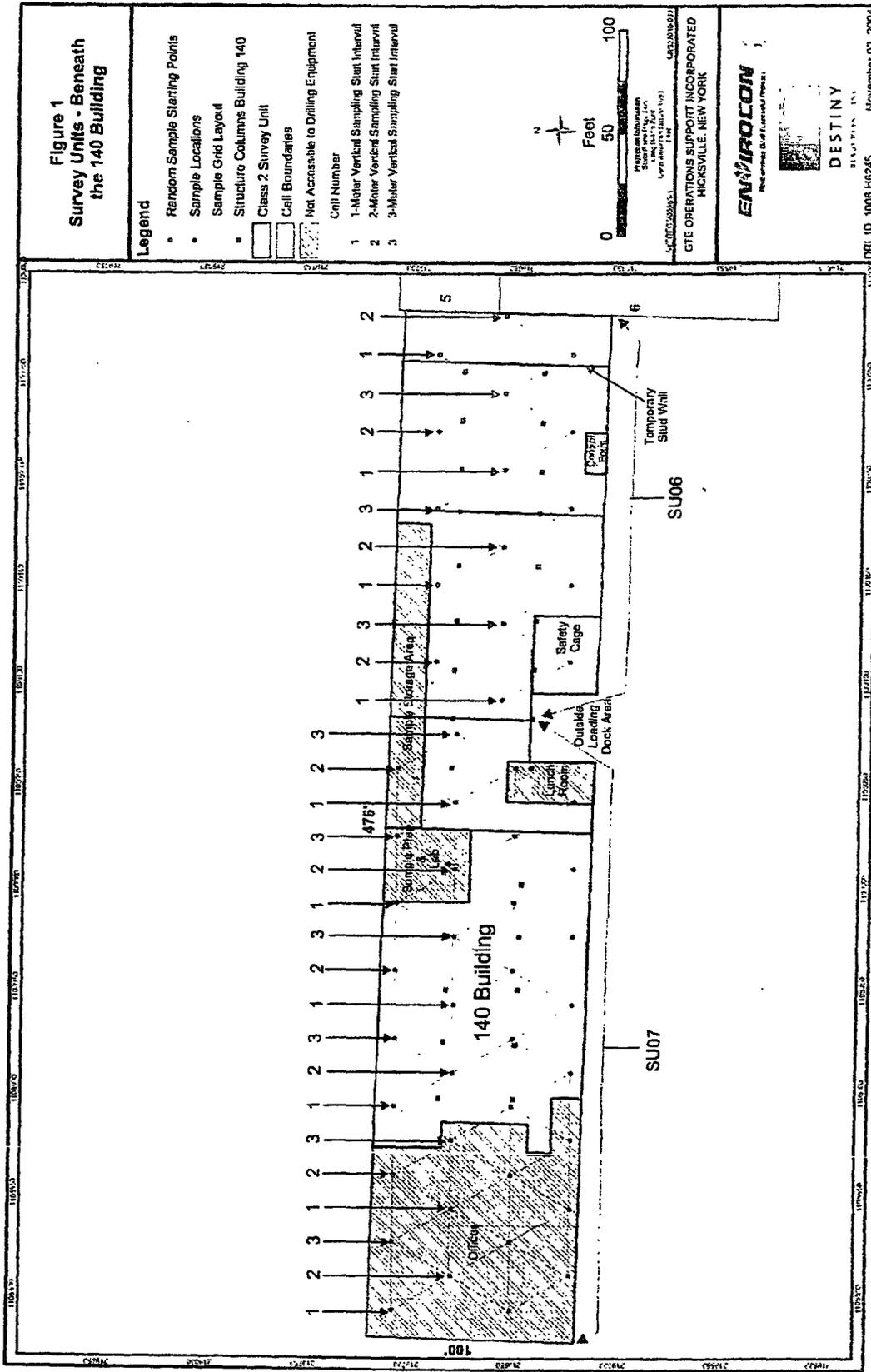
As stated earlier, each 3-m (10-ft) sampling interval data set will be evaluated independently as a soil (undulating planar) surface sample set generated from all SP samples within that 3-m (10-ft) interval. Therefore, there will be at least three independent evaluations of the surface and subsurface soils within each SU.

7.2 CHEMICAL

The chemical analytical results will be evaluated independently and compared to the Site cleanup levels specified in the Work Plan, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4060, or Site background concentrations. Exceedences will be considered for additional investigation or remedial action, as appropriate.

8.0 SCHEDULE

The work described in this SSSAP is scheduled to start in December 2004.



ENVIROCON
THE ORIGINAL DUST EXHAUST SYSTEM

DESTINY
STATIONERY

ORI ID 1008.H6245 November 03, 2006

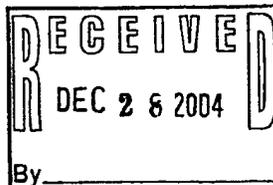
GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

APPENDIX B

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • FAX: (631) 444-0248
Website: www.dec.state.ny.us



December 20, 2004



Jean Agostinelli
Vice President - Contoller
GTE Operations Support Inc.
600 Hidden Ridge Drive (HQE03E75)
Irving, TX 75038

Re: Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 140 Building and
Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 100 Building
Former Sylvania Electric Products Facility, #V00089-1

Dear Ms. Agostinelli:

The Department offers the following comments on the subject documents:

1) 100 Building - Vertical Sampling Depth

Please clarify ground surface reference point particularly as it relates to the loading dock area of the 100 property. The loading dock floor is approximately four to five feet below the 100 building's floor. The Department wants to ensure that the six foot buffer built into your sampling plan is not lost.

2) Soil Gas Sampling

Based on a preliminary analysis of the groundwater sampling results, there may still be undiscovered source areas for chlorinated solvents in the western and central portions of the site. As another tool in identifying the location of these volatile organic compounds, the Department requests that a soil gas sample be collected from each borehole after the proposed shallow samples have been removed. Please propose a depth at which to collect these soil gas samples which is somewhere between three feet and ten feet below the building slab. The samples could be analyzed by a PID in a head space sample or by your on-site laboratory, whichever you prefer.

3) Additional Investigation Borings Between Survey Units SU05 and SU04 and Between Survey Units SU04 and SU05 for the 100 Building

There is a space between survey units SU04 and SU05 and between SU03 and SU04. It is not necessary to alter the survey units. However, I am requesting five additional investigation

borings at the locations shown in the attached figure to give better coverage.

The space between SU04 and SU05 is by western portion of the chemical processing area for the former AEC building on the south portion of the gap and by an historical metal storage tank and stucco building on the north portion of the gap. Groundwater data suggests the presence of potential nickel and VOC source areas near this gap. The nickel and radiological contamination found in cell 9 probably extends to under the 100 building.

The space between SU03 and SU04 is just north of the process tank found in the northwest corner of cell 10 and is near the eastern wall of the former AEC building. The piping leading from the 100 building to the former reservoir in the rear of the 100 property apparently originated near the northeast corner of the AEC building. Based on an old figure, there was a pump in the cellar of this portion of the building which probably was used to pump water to the reservoir. This area is of interest due to contamination discovered in the reservoir. Additionally, the source of the radiological contamination in MW-2, which is downgradient of this area, has apparently not been found yet.

It is for the above reasons that I am requesting the additional investigation borings.

4) Historical Leaching Pool by the 140 Building Loading Dock

There is one historical leaching reportedly located inside the 140 building, just west of the loading dock, that was not investigated in the recent leaching pool investigation. It is just west of the former Building 2, the earlier commercial manufacturing building, and just east of a two-story frame building which I believe to be the "farm house". The farm house may have been used historically for machining operations. In SU07 for the 140 building, the survey point in the southeast corner of this survey unit comes very near the location of this former leaching pool. Please move this survey point slightly so that is located over the expected center of this pool. This pool must be investigated due to the high concentrations of PCE that were detected in nearby LPH21. Since the sediment sample in LPH21 detected percent concentrations, degreasing operations were most likely located historically somewhere near this pool. The leaching pool apparently is within the area identified as the "Lunch Room" on your figure. Please let me know if this presents a difficulty in investigating this pool.

If high soil gas readings are detected in any of the grid samples near the "Safety Cage" by the western portion of Building 2, additional borings will be requested around this area later. The western portion of that building would be the most likely source of the solvents that were found in LPH21.

Please address these comments in a revised work plan to be submitted within 30 days of your receipt of this letter. Please do not hesitate to call me at (631) 444-0244 if you have any questions or disagree with these comments.

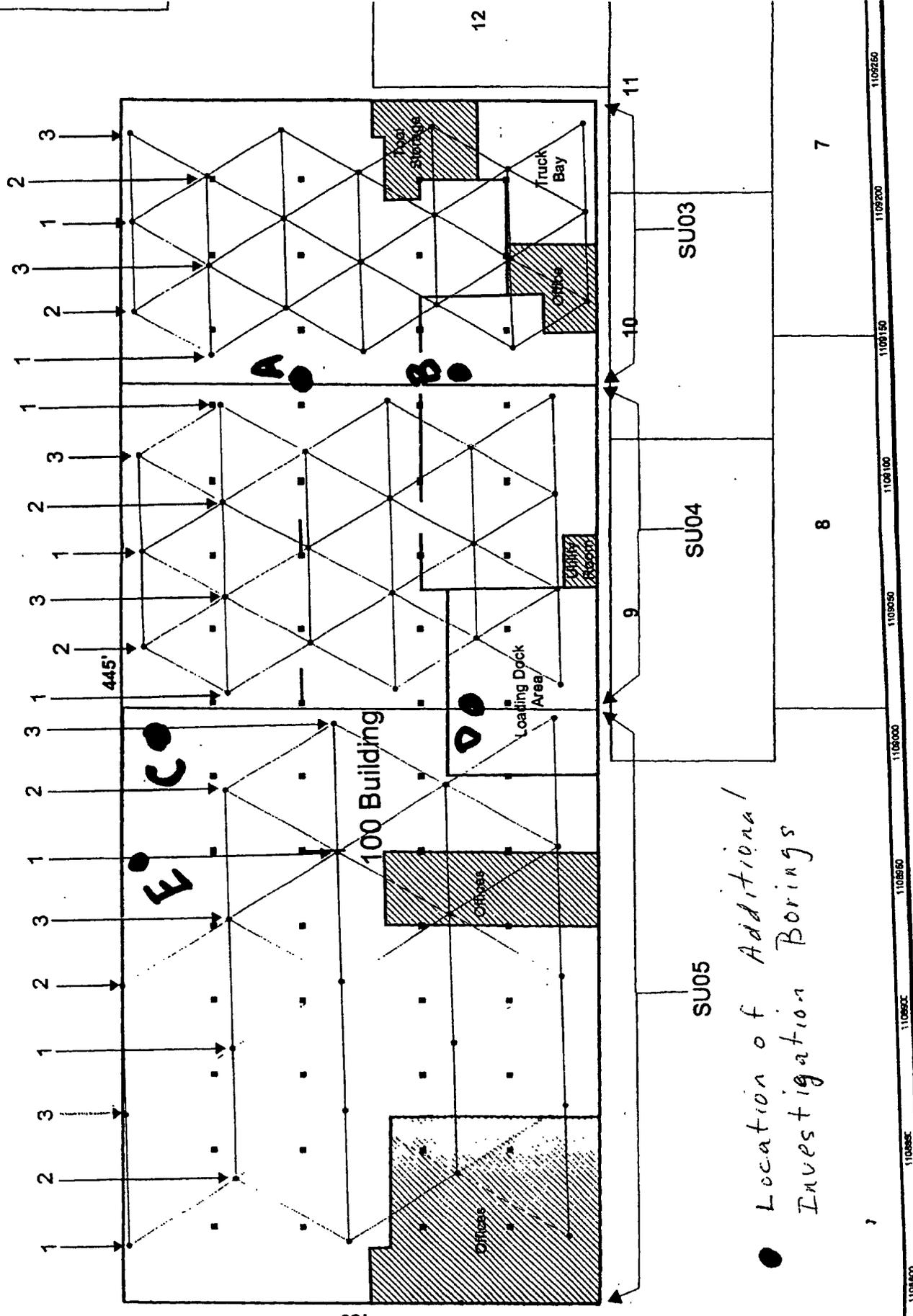
Sincerely,



Robert R. Stewart
Environmental Engineer I

Enclosure

cc: W. Parish
K. Carpenter
J. Riggi
J. Nealon, NYSDOH



● Location of Additional Investigation Borings



GTE Operations Support Incorporated
600 Hidden Ridge Drive (HQE03E75)
Irving, Texas 75038
(972) 718-4806

January 20, 2005

Mr. Robert Stewart
Division of Environmental Remediation
New York State Department of Environmental Conservation
SUNY Campus Loop Bldg. 40
Stony Brook, New York 11790-2356

Re: **Response to NYSDEC Comments of December 20, 2004 on the
*Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 140 Building and
Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 100 Building
Former Sylvania Electric Products Facility, #V00089-1***

Dear Mr. Stewart:

Thank you for your December 20, 2004 response to our November 17, 2004 submittal of the referenced Work Plans. To address your comments, the following responses have been prepared for your consideration. The comment responses are presented below, in full or in part, in the order that they appeared in your letter.

Comment 1: 100 Building - Vertical Sampling Depth

Please clarify ground surface reference point particularly as it relates to the loading dock area of the 100 property. The loading dock floor is approximately four to five feet below the 100 building's floor. The Department wants to ensure that the six foot buffer built into your sampling plan is not lost.

Response: *We are standardizing these borings to a baseline elevation on Site, therefore we will be able to maintain a consistent sampling depth interval applicable to the survey units. Based on this approach, the 6-foot buffer described in the Vertical Sampling Depth section of both plans is preserved.*

Comment 2: Soil Gas Sampling

Based on a preliminary analysis of the groundwater sampling results, there may still be undiscovered source areas for chlorinated solvents in the western and central portions of the site. As another tool in identifying the location of these volatile organic compounds, the Department requests that a soil gas sample be collected from each borehole after the proposed shallow samples have been removed.

Mr. Robert Stewart
January 20, 2005
Page 2

Please propose a depth at which to collect these soil gas samples which is somewhere between three feet and ten feet below the building slab. The samples could be analyzed by a PID in a head space sample or by your on-site laboratory, whichever you prefer.

Response: *As part of the standard operating procedures for sample recovery, every soil sample that is recovered is screened for soil gases using a PID as the sampler is opened. If a sample shows indications of volatile organic compounds above 10 parts per million, an additional soil sample is sent to the on-Site laboratory for analysis. The depths of sample recovery are defined within the plans and all sample locations in the Systematic Subsurface Soil Sampling protocol have at least one sample recovered from the 3- to 10-foot depth interval as requested.*

After the analytical data is available, we can evaluate the need for additional information with the NYSDEC.

Comment 3: Additional Investigation Borings Between Survey Units SU03 and SU04 and Between Survey Units SU04 and SU05 for the 100 Building

There is a space between survey units SU04 and SU05 and between SU03 and SU04. It is not necessary to alter the survey units. However, I am requesting five additional investigation borings at the locations shown in the attached figure to give better coverage.

The space between SU04 and SU05 is by western portion of the chemical processing area for the former AEC building on the south portion of the gap and by an historical metal storage tank and stucco building on the north portion of the gap. Groundwater data suggests the presence of potential nickel and VOC source areas near this gap. The nickel and radiological contamination found in cell 9 probably extends to under the 100 building.

The space between SU03 and SU04 is just north of the process tank found in the northwest corner of cell 10 and is near the eastern wall of the former AEC building. The piping leading from the 100 building to the former reservoir in the rear of the 100 property apparently originated near the northeast corner of the AEC building. Based on an old figure, there was a pump in the cellar of this portion of the building which probably was used to pump water to the reservoir. This area is of interest due to contamination discovered in the reservoir. Additionally, the source of the radiological contamination in MW-2, which is downgradient of this area, has apparently not been found yet.

It is for the above reasons that I am requesting the additional investigation borings.

Response: *We will add Borings A and B to SU03. Boring D will be added as a biased sample location in SU04 since it will not fall into the Systematic Sampling Protocol. Borings C and E will be added to SU05. The borings will be renamed to comply with the existing boring nomenclature used for the survey units, assigned to appropriate sampling interval columns, and sampled in accordance with the Systematic Sampling Protocol.*

Mr. Robert Stewart
January 20, 2005
Page 3.

Comment 4: Historical Leaching Pool by the 140 Building Loading Dock

There is one historical leaching reportedly located inside the 140 building, just west of the loading dock, that was not investigated in the recent leaching pool investigation. It is just west of the former Building 2, the earlier commercial manufacturing building, and just east of a two-story frame building which I believe to be the "farm house". The farm house may have been used historically for machining operations. In SU07 for the 140 building, the survey point in the southeast corner of this survey unit comes very near the location of this former leaching pool. Please move this survey point slightly so that is located over the expected center of this pool. This pool must be investigated due to the high concentrations of PCE that were detected in nearby LPH21. Since the sediment sample in LPH21 detected percent concentrations, degreasing operations were most likely located historically somewhere near this pool. The leaching pool apparently is within the area identified as the "Lunch Room" on your figure. Please let me know if this presents a difficulty in investigating this pool.

If high soil gas readings are detected in any of the grid samples near the "Safety Cage" by the western portion of Building 2, additional borings will be requested around this area later. The western portion of that building would be the most likely source of the solvents that were found in LPH21.

Response: *This historic leaching pool, designated as LPH34, will be added and evaluated under the LPH Sampling Protocol. Reasonable attempts will be made to locate LPH34 and sample as many locations as possible using the LPH Sampling Protocol; however, several obstructions are present in this area (lunch room, loading dock, safety cage, equipment, etc.) that may impede access. Please note that we do not have any information regarding the historical use of this LPH.*

This letter will be attached as an addendum to the referenced work plans. We plan to begin work described in the subject work plans in mid January.

If you have any questions or require additional information, please do not hesitate to contact me. I can be reached at (214) 724-2506 or via facsimile (972) 719-0065.

Sincerely,



Jean M. Agostinelli
Vice President and Controller

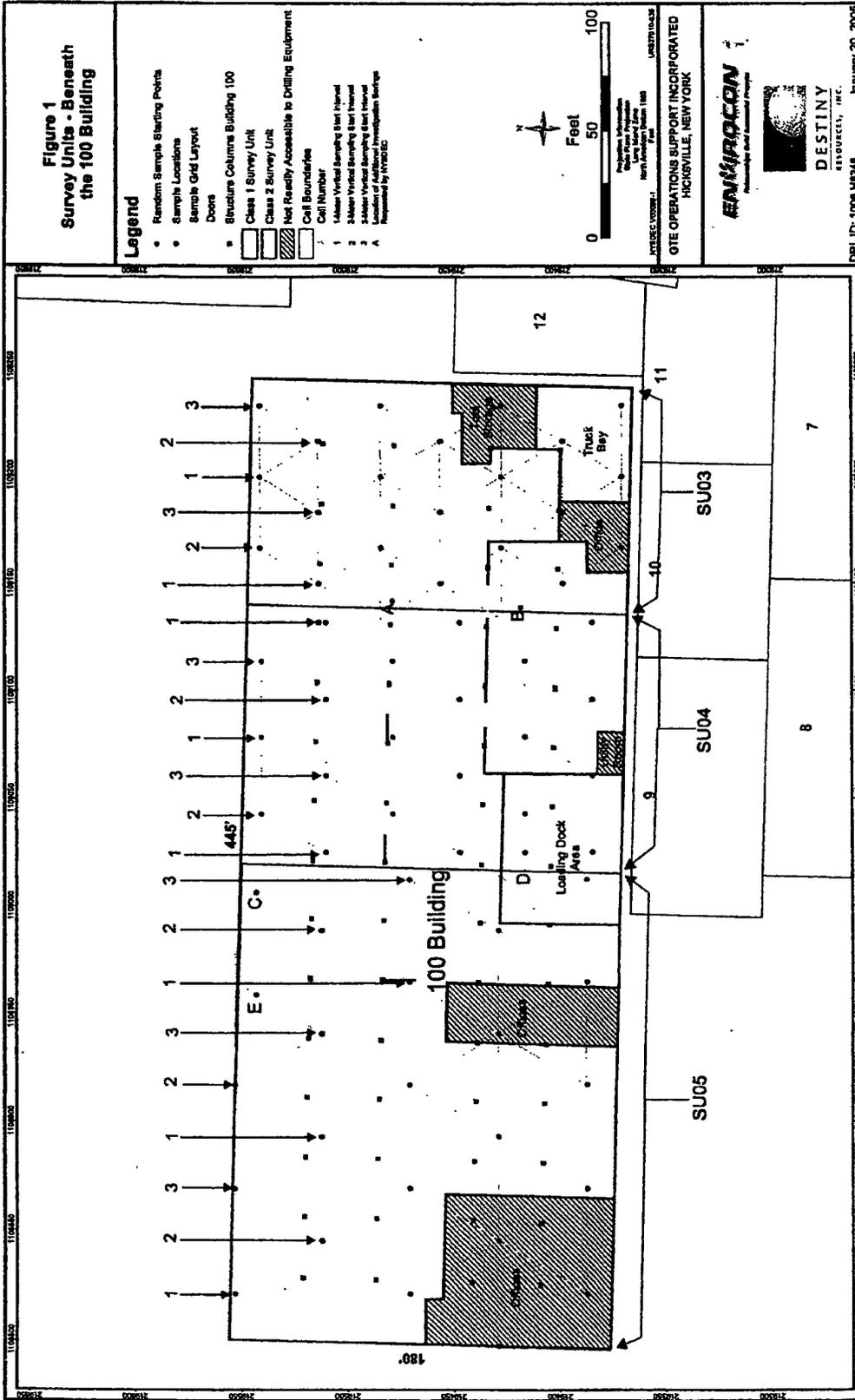
Mr. Robert Stewart
January 20, 2005
Page 4

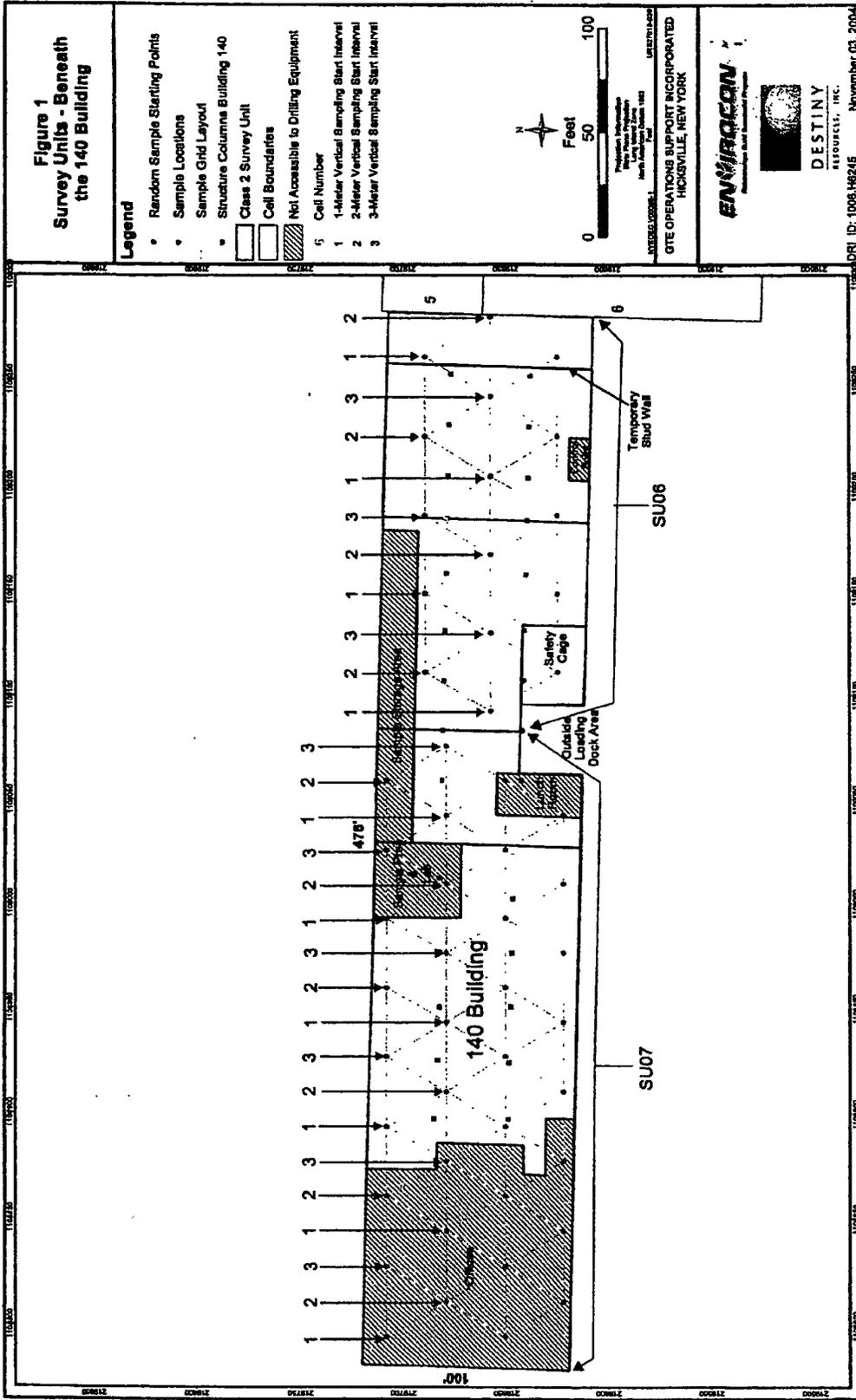
Walter Perish
Division of Environmental Remediation,
Region One
New York State Department of
Environmental Conservation
Building 40 – SUNY
Stony Brook, NY 11790-0248

Jacquelyn Nealon
Bureau of Environmental Exposure
Investigation
New York State Department of Health
Flannegan Square, Rm 300
547 River Street
Troy, NY 12180-2216

Jerry Riggi
Division of Solid and Hazardous Materials
Bureau of Hazardous Waste & Radiation
Management
New York State Department of
Environmental Conservation
625 Broadway
Albany, NY 12233-7255

Kevin Carpenter
Division of Environmental Remediation
New York State Department of
Environmental Conservation
625 Broadway
Albany, NY 12233-7015





New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

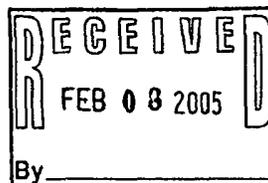
Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner



January 31, 2005

Jean Agostinelli
Vice President - Contoller
GTE Operations Support, Inc.
600 Hidden Ridge Drive (HQE03E75)
Irving, TX 75038

Re: January 20, 2005 Response to NYSDEC Comments of December 20, 2004 on the SSSAP
Beneath the 140 Building and the SSSAP Beneath the 100 Building
Former Sylvania Electric Products Facility; Site # V00089-1

Dear Ms. Agostinelli:

As indicated in my conference call with your staff, the proposed changes to the Subsurface Soil Sampling and Analysis Plan (SSSAP) Beneath the 140 Building, November 2004 and the SSSAP Beneath the 100 Building, November 2004, as stated in your letter dated January 20, 2005 are acceptable. With a copy of the January 20, 2005 letter attached to each of the November 2004 SSSA Plans, these documents are both hereby approved.

As you know, the Department requested that a soil gas survey be performed in conjunction with the two investigations noted above. However, your staff indicated that it would be difficult to add this sampling to the proposed work. Instead, you have committed to perform a soil gas survey on a grid later to evaluate soil gases beneath the buildings. I am attaching a copy of an e-mail message documenting your commitment to perform the soil gas survey.

You may proceed with these investigations. I am requesting that after you complete each borehole that you backfill them with clean, sandy fill of the similar porosity in each boring. If this presents any difficulties to you, please let me know. After you have completed each survey unit, the Department plans to perform a preliminary soil gas survey for each survey unit by inserting a soil gas probe into the backfilled soils to approximately 31 inches in each borehole. The soils will be pushed down around the probe at the surface to prevent drawing in vapors from above the borehole. The soil probe will be connected to an HNu with a 10.2 eV probe calibrated to benzene. Peak and steady-state soil gas readings will be recorded. The purpose of these preliminary soil gas surveys for SU-03 through SU-07 is to help determine the grid spacing and analytical requirements for the subsequent soil gas surveys for these survey units that you will perform later. It is also expected that the results of the preliminary soil gas surveys will help the Department with its interpretation of the results of your soil sampling for volatile organic compounds. Of course, you may oversee this sampling and I'll share my results with you.

The Department realizes that the preliminary soil gas surveys performed by the Department are just a preliminary screening tool. Consequently, no formal report will be prepared.

If you have any questions, please do not hesitate to call me.

Sincerely,



Robert R. Stewart
Environmental Engineer I

Enclosure

cc: W. Parish
J. Riggi
K. Carpenter
J. Nealon, NYSDOH

From: <elie.a.ghannoum@verizon.com>
To: "Robert Stewart" <rrstewar@gw.dec.state.ny.us>, "Walter Parish" <wjparish@gw.dec.state.ny.us>
Date: 1/27/05 1:38PM
Subject: January 26, 05 Conference Call

Bob, per our conference call as of yesterday (1/26/05) with you and Walter, if the Department feels that it is necessary to conduct soil vapor sampling within the survey units 3 through 7 of the 140 and 100 Buildings once the soil investigation beneath the Buildings are completed and the results of the investigation are presented to the Department, GTEOSI will submit to NYSDEC a sampling grid pattern and established protocol by which such sampling will be conducted. With the understanding as described above, GTEOSI, with your approval, will commence the work as outlined in our letter to you dated November 17, 2004 and our January 20, 2005 response to your comments of December 20, 2004 on the Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 140 Building and Systematic Subsurface Soil Sampling and Analysis Plan Beneath the 100 Building.

Thanks

Elie

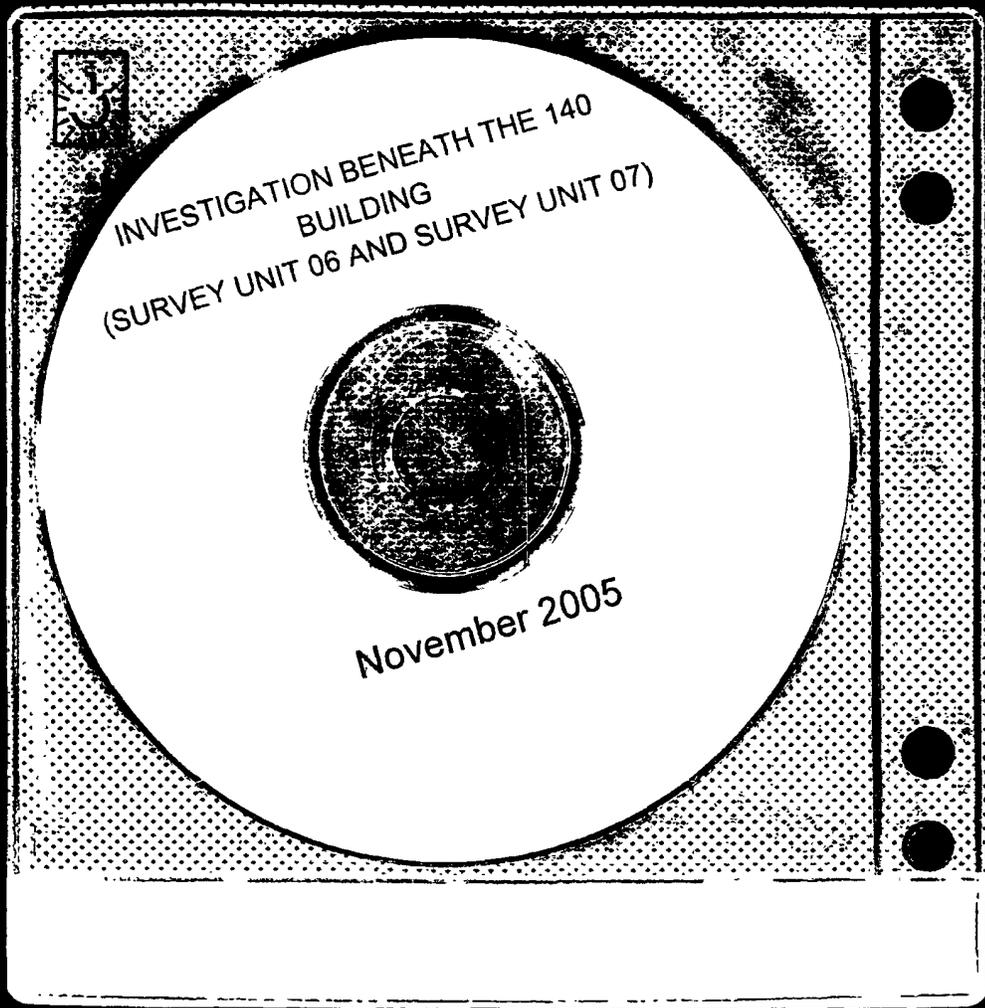
(Embedded image moved to file:
pic06903.gif)

CC: "Lucky Tabor" <LTabor@envirocon.com>, <Rob_Brathovde@URSCorp.com>, <Carol_Scholl@URSCorp.com>, <Michael_Ander@URSCorp.com>, <jean.agostinelli@verizon.com>

APPENDIX C

Appendix C – Boring Logs

Boring Logs are available for review on CD provided.



APPENDIX D

SU06 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

SU06, Intervals 1, 2, and 3 passed the MARSSIM¹ Sign Test and the associated soils are considered releasable from a radiological perspective. These intervals consist of SP samples collected and analyzed in the 0 to 3-m, 3 to 6-m, and 6 to 9-m depth ranges, respectively. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates all of the SP sample results for a single interval separately. Therefore, there were three independent evaluations within the three-dimensional footprint of SU06.

There were a total of 15 SP sample results in Interval 1, Interval 2, and Interval 3, respectively. All samples were analyzed for radiological analytes of interest (Th-232, U-234, and U-238) for purposes of this evaluation. The sample results for each of the samples are presented in **Table 2** and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Intervals 1 and 2, a minimum of 13 soil sample analyses were sufficient for the MARSSIM-based analysis to be statistically significant. As shown on the first page of the COMPASS Surface Soil Survey Plan for Interval 3, a minimum of 14 soil sample analyses were sufficient for the MARSSIM-based analysis to be statistically significant. As stated earlier, this MARSSIM-based analysis for Intervals 1, 2, and 3 in this SU were each based on 15 soil sample analyses, respectively.

Included in the assessment of SU06 are three reports. The cover report is titled *Site Report* and provides information the radiological contaminants and their respective DCGLw³ (the Site cleanup levels specified in the Work Plan) used in the evaluation of each interval.

Each interval assessment is comprised of two COMPASS reports. The first report is titled *Surface Soil Survey Plan*. This report contains information that was used in the planning phase of the survey or soil sample collection. This information was based on the Site's cleanup levels and cell parameters or is information that was derived from these parameters. The last section of this report contains information that, by design, was an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit interval for each radionuclide. The values in this report were based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results.

The second report is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametric statistical analysis called the Sign Test on the samples results. On the first page of this report is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)* for all three intervals. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. Also included in the report is a table titled *Basic Statistical Quantities Summary*. The average or mean SOR is shown in this table. This SOR value is high (conservative) by approximately a factor of 2 due to the use of individual uranium radionuclides in the evaluation and the limitations on the flexibility of this version of COMPASS. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementing the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.



Site Report

Site Summary

Site Name: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm²

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

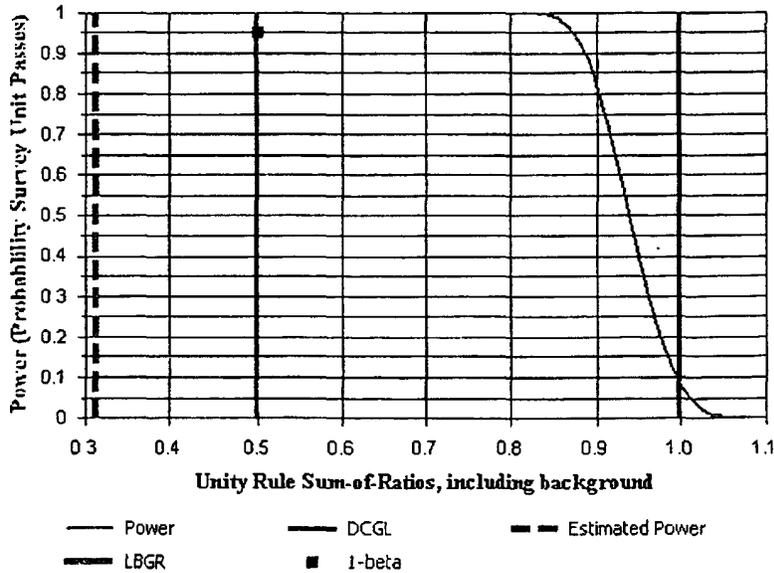


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU06 Interval 1 01		
Comments:	SU06 Interval 1 Run 01		
Area (m ²):	1,635	Classification:	2
Selected Test:	Sign	Estimated Sigma (SOR):	0.12
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.31
Alpha:	0.050	Estimated Power:	1
Beta:	0.050		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.631 \pm 0.278	N/A
U-234	2.462 \pm 2.291	N/A
U-238	1.864 \pm 1.976	N/A

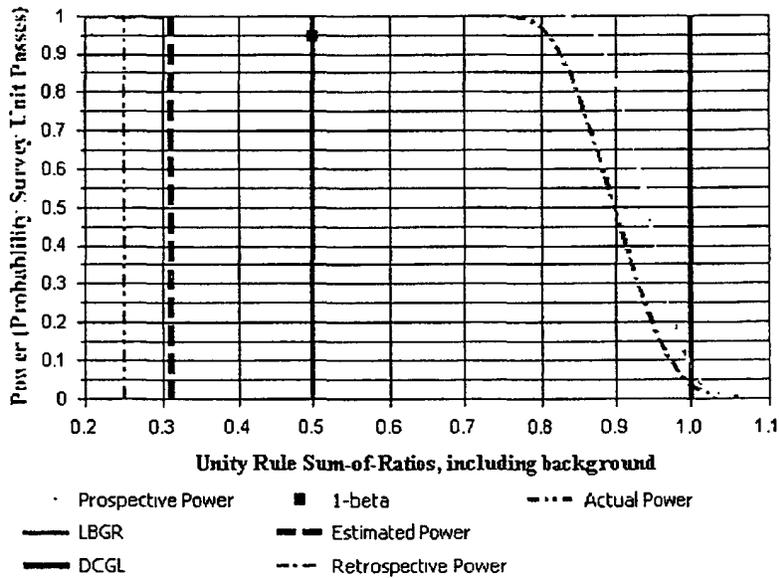


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell
Survey Unit Name: SU06 Interval 1 01
Report Number: 1
Survey Unit Samples: 15
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	15	N/A	N=13
Mean (SOR)	0.31	N/A	0.31
Median (SOR)	0.25	N/A	N/A
Std Dev (SOR)	0.16	N/A	0.12
High Value (SOR)	0.62	N/A	N/A
Low Value (SOR)	0.09	N/A	N/A



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
27977	S	0.47	2.44	1.19
26851	S	0.83	2.37	1.87
28398	S	0.58	0.5	0.61
27682	S	0.97	7.4	6.06
28278	S	0.64	5.19	1.93
27060	S	0.72	5.76	5.42
28342	S	0.38	1.08	0.77
27318	S	0.65	0.69	0.41
27882	S	0.36	1.91	0.83
28205	S	0.79	3.19	2.33
27776	S	1.07	4.62	4.89
27421	S	1.08	0.75	0.76
28107	S	0.42	0.42	0.38
27593	S	0.22	0.29	0.27
27502	S	0.29	0.32	0.23

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
27977	S	0.24
26851	S	0.38
28398	S	0.23
27682	S	0.62
28278	S	0.37
27060	S	0.48
28342	S	0.17
27318	S	0.25
27882	S	0.18
28205	S	0.39
27776	S	0.57
27421	S	0.42
28107	S	0.17
27593	S	0.09
27502	S	0.11



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
27977	S	0.47	2.44	1.19
26851	S	0.83	2.37	1.87
28398	S	0.58	0.5	0.61
27682	S	0.97	7.4	6.06
28278	S	0.64	5.19	1.93
27060	S	0.72	5.76	5.42
28342	S	0.38	1.08	0.77
27318	S	0.65	0.69	0.41
27882	S	0.36	1.91	0.83
28205	S	0.79	3.19	2.33
27776	S	1.07	4.62	4.89
27421	S	1.08	0.75	0.76
28107	S	0.42	0.42	0.38
27593	S	0.22	0.29	0.27
27502	S	0.29	0.32	0.23

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample

Sample Number	Type	Sum-of-Ratios (SOR)
27977	S	0.24
26851	S	0.38
28398	S	0.23
27682	S	0.62
28278	S	0.37
27060	S	0.48
28342	S	0.17
27318	S	0.25
27882	S	0.18
28205	S	0.39
27776	S	0.57
27421	S	0.42
28107	S	0.17
27593	S	0.09
27502	S	0.11



Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLW (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLW (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.224 \pm 0.075	N/A
U-234	1.788 \pm 0.945	N/A
U-238	0.945 \pm 2.837	N/A

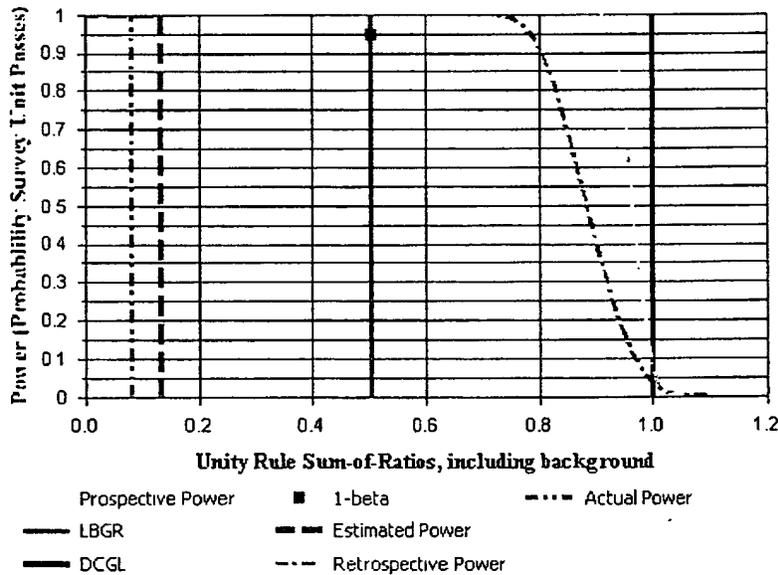


DQA Surface Soil Report

Assessment Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU06 Interval 2 01		
Report Number:	1		
Survey Unit Samples:	15		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	<i>Reject Null Hypothesis (Survey Unit PASSES)</i>		

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
28008	S	0.42	0.32	0.33
26873	S	0.27	0.24	0.3
28413	S	0.25	0.23	0.24
27705	S	0.27	0.31	0.24
28299	S	0.21	0.22	0.22
27082	S	0.17	0.21	0.24
28359	S	0.19	0.19	0.22
27335	S	0.26	0.21	0.21
27911	S	0.15	0.24	0.18
28223	S	0.17	0.21	0.16
27791	S	0.26	0.16	0.18
27436	S	0.19	0.2	0.17
28144	S	0.28	23.8	11.2
27609	S	0.1	0.13	0.13
27528	S	0.17	0.14	0.15

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28008	S	0.16
26873	S	0.11
28413	S	0.1
27705	S	0.11
28299	S	0.08
27082	S	0.07
28359	S	0.08
27335	S	0.1
27911	S	0.06
28223	S	0.07
27791	S	0.1
27436	S	0.07
28144	S	0.8
27609	S	0.04
27528	S	0.07



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
28008	S	0.42	0.32	0.33
26873	S	0.27	0.24	0.3
28413	S	0.25	0.23	0.24
27705	S	0.27	0.31	0.24
28299	S	0.21	0.22	0.22
27082	S	0.17	0.21	0.24
28359	S	0.19	0.19	0.22
27335	S	0.26	0.21	0.21
27911	S	0.15	0.24	0.18
28223	S	0.17	0.21	0.16
27791	S	0.26	0.16	0.18
27436	S	0.19	0.2	0.17
28144	S	0.28	23.8	11.2
27609	S	0.1	0.13	0.13
27528	S	0.17	0.14	0.15

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28008	S	0.16
26873	S	0.11
28413	S	0.1
27705	S	0.11
28299	S	0.08
27082	S	0.07
28359	S	0.08
27335	S	0.1
27911	S	0.06
28223	S	0.07
27791	S	0.1
27436	S	0.07
28144	S	0.8
27609	S	0.04
27528	S	0.07



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	15	N/A	N=13
Mean (SOR)	0.13	N/A	0.13
Median (SOR)	0.08	N/A	N/A
Std Dev (SOR)	0.19	N/A	0.07
High Value (SOR)	0.80	N/A	N/A
Low Value (SOR)	0.04	N/A	N/A

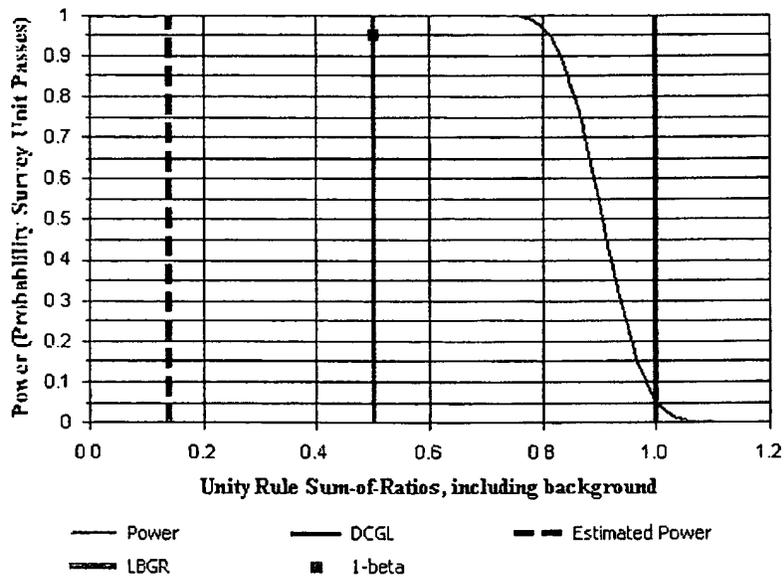


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU06 Interval 3 01		
Comments:	SU06 Interval 3 Run 01		
Area (m ²):	1,635	Classification:	2
Selected Test:	Sign	Estimated Sigma (SOR):	0.17
DCGL (SOR):	1	Sample Size (N):	14
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.14
Alpha:	0.050	Estimated Power:	1
Beta:	0.050		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.218 \pm 0.055	N/A
U-234	2.125 \pm 7.435	N/A
U-238	1.167 \pm 3.827	N/A



DQA Surface Soil Report

Assessment Summary

Site: GTEOSI - Hicksville Site

Planner(s): Shane Brightwell

Survey Unit Name: SU06 Interval 3 01

Report Number: 1

Survey Unit Samples: 15

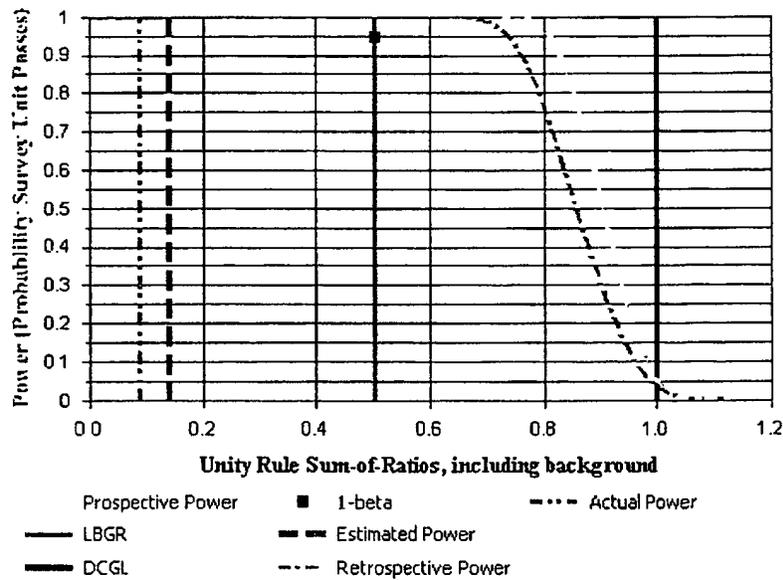
Reference Area Samples: 0

Test Performed: Sign Test Result: Not Performed

Judgmental Samples: 0 EMC Result: Not Performed

Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
28017	S	0.14	0.18	0.21
26899	S	0.24	0.22	0.23
28420	S	0.22	0.18	0.17
27720	S	0.25	0.17	0.18
28318	S	0.3	0.19	0.14
27094	S	0.33	0.32	0.33
28371	S	0.16	0.2	0.13
27365	S	0.19	0.18	0.18
27931	S	0.26	0.2	0.17
28257	S	0.18	0.3	0.16
27816	S	0.17	0.13	0.14
27453	S	0.26	0.27	0.18
28171	S	0.24	29	15
27635	S	0.18	0.16	0.13
27555	S	0.17	0.16	0.17

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28017	S	0.06
26899	S	0.09
28420	S	0.09
27720	S	0.1
28318	S	0.11
27094	S	0.13
28371	S	0.06
27365	S	0.07
27931	S	0.1
28257	S	0.07
27816	S	0.07
27453	S	0.1
28171	S	0.97
27635	S	0.07
27555	S	0.07



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	15	N/A	N=14
Mean (SOR)	0.14	N/A	0.14
Median (SOR)	0.09	N/A	N/A
Std Dev (SOR)	0.23	N/A	0.17
High Value (SOR)	0.97	N/A	N/A
Low Value (SOR)	0.06	N/A	N/A

SU07 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

SU07, Intervals 1, 2, and 3 passed the MARSSIM¹ Sign Test and the associated soils are considered releasable from a radiological perspective. These intervals consist of SP samples collected and analyzed in the 0 to 3-m, 3 to 6-m, and 6 to 9-m depth ranges, respectively. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates all of the SP sample results for a single interval separately. Therefore, there were three independent evaluations within the three-dimensional footprint of SU07.

There were a total of 22 SP sample results in Interval 1, Interval 2, and Interval 3, respectively. All samples were analyzed for radiological analytes of interest (Th-232, U-234, and U-238) for purposes of this evaluation. The sample results for each of the samples are presented in Table 2 and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Interval 1, a minimum of 15 soil sample analyses were sufficient for the MARSSIM-based analysis to be statistically significant. As shown on the first page of the COMPASS Surface Soil Survey Plan for Intervals 2 and 3, a minimum of 13 soil sample analyses were sufficient for the MARSSIM-based analyses to be statistically significant. As stated earlier, this MARSSIM-based analysis for Intervals 1, 2, and 3 in this SU were each based on 22 soil sample analyses, respectively.

Included in the assessment of SU07 are three reports. The cover report is titled *Site Report* and provides information the radiological contaminants and their respective DCGLw³ (the Site cleanup levels specified in the Work Plan) used in the evaluation of each interval.

Each interval assessment is comprised of two COMPASS reports. The first report is titled *Surface Soil Survey Plan*. This report contains information that was used in the planning phase of the survey or soil sample collection. This information was based on the Site's cleanup levels and cell parameters or is information that was derived from these parameters. The last section of this report contains information that, by design, was an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit interval for each radionuclide. The values in this report were based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results.

The second report is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametric statistical analysis called the Sign Test on the samples results. On the first page of this report is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)* for all three intervals. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. Also included in the report is a table titled *Basic Statistical Quantities Summary*. The average or mean SOR is shown in this table. This SOR value is high (conservative) by approximately a factor of 2 due to the use of individual uranium radionuclides in the evaluation and the limitations on the flexibility of this version of COMPASS. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementing the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.



Site Report

Site Summary

Site Name: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
10,000	1				
U-234	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
10,000	1				
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
10,000	1				

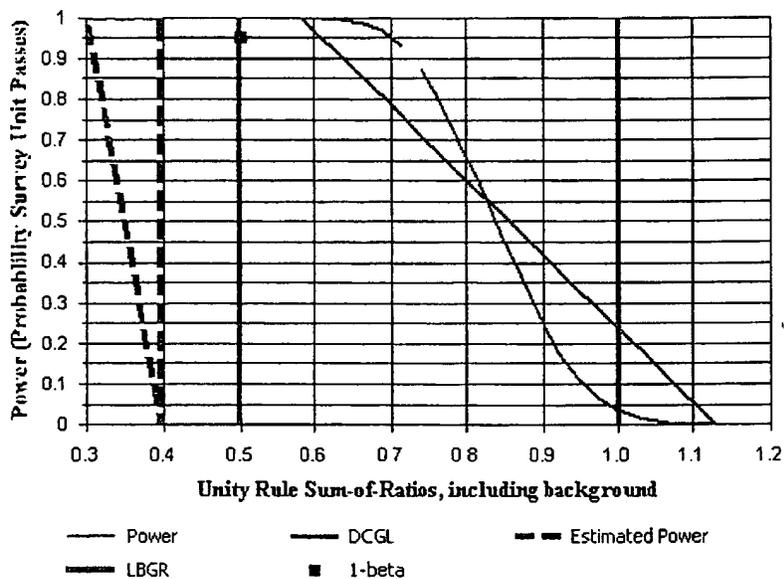


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU07 Interval 1 01		
Comments:	SU07 Interval 1 Run 01		
Area (m ²):	1,411	Classification:	2
Selected Test:	Sign	Estimated Sigma (SOR):	0.26
DCGL (SOR):	1	Sample Size (N):	15
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.4
Alpha:	0.050	Estimated Power:	1
Beta:	0.050		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.513 \pm 0.206	N/A
U-234	6.279 \pm 10.16	N/A
U-238	4.335 \pm 7.145	N/A

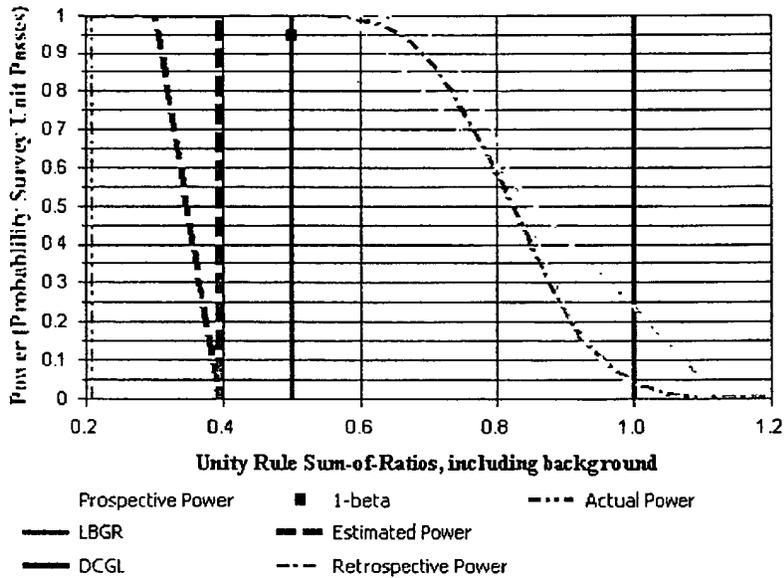


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell
Survey Unit Name: SU07 Interval 1.01
Report Number: 1
Survey Unit Samples: 22
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
29454	S	0.39	0.53	0.47
29209	S	0.73	15.3	8.8
29346	S	0.43	26.8	26.6
28746	S	0.76	24.1	11.6
29656	S	0.56	9.5	9.3
29067	S	0.85	2.69	2.63
29545	S	0.69	18.5	18.9
28902	S	0.93	32.4	10.3
29256	S	0.78	0.62	0.55
29717	S	0.57	3.04	2.7
29030	S	0.37	0.43	0.41
29403	S	0.38	0.48	0.53
28517	S	0.52	0.97	0.29
29620	S	0.46	0.41	0.4
28969	S	0.57	0.39	0.32
29306	S	0.36	0.32	0.3
29791	S	0.18	0.22	0.01
29127	S	0.39	0.3	0.22
28456	S	0.3	0.29	0.29
29577	S	0.2	0.23	0.19
28844	S	0.36	0.24	0.26
29500	S	0.52	0.38	0.28

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
29454	S	0.16
29209	S	0.74
29346	S	1.22
28746	S	0.99
29656	S	0.58
29067	S	0.41
29545	S	0.99
28902	S	1.19
29256	S	0.3
29717	S	0.32
29030	S	0.15
29403	S	0.16
28517	S	0.21
29620	S	0.18
28969	S	0.22
29306	S	0.14
29791	S	0.07
29127	S	0.15



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28456	S	0.12
29577	S	0.08
28844	S	0.14
29500	S	0.2



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	22	N/A	N=15
Mean (SOR)	0.40	N/A	0.4
Median (SOR)	0.21	N/A	N/A
Std Dev (SOR)	0.38	N/A	0.26
High Value (SOR)	1.22	N/A	N/A
Low Value (SOR)	0.07	N/A	N/A

Statistical Test Summary

S+:	20
Critical Value:	15
Result:	Pass

Data	DCGLw - Data	Sign
0.16	0.84	+
0.74	0.26	+
1.22	-0.22	-
0.99	0.01	+
0.58	0.42	+
0.41	0.59	+
0.99	0.01	+
1.19	-0.19	-
0.3	0.70	+
0.32	0.68	+
0.15	0.85	+
0.16	0.84	+
0.21	0.79	+
0.18	0.82	+
0.22	0.78	+
0.14	0.86	+
0.07	0.93	+
0.15	0.85	+
0.12	0.88	+
0.08	0.92	+
0.14	0.86	+
0.2	0.80	+

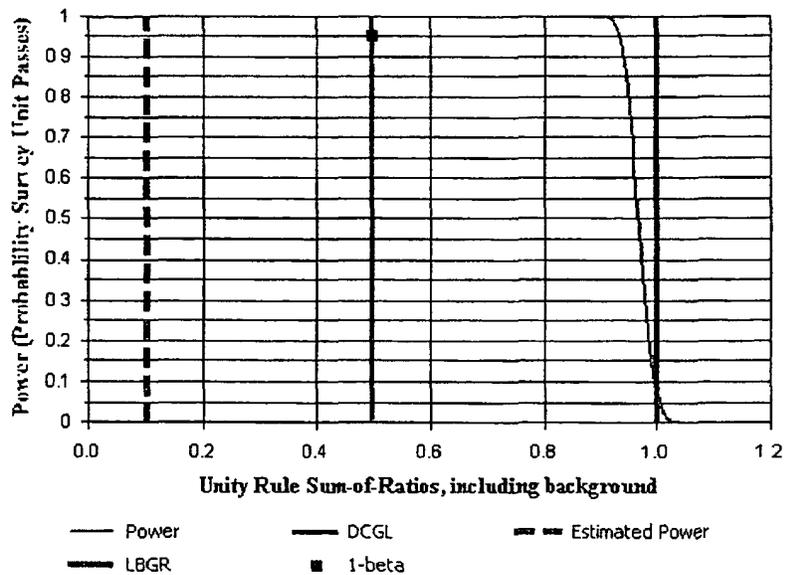


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU07 Interval 2 01		
Comments:	SU07 Interval 2 Run 01		
Area (m ²):	1,411	Classification:	2
Selected Test:	Sign	Estimated Sigma (SOR):	0.06
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.1
Alpha:	0.050	Estimated Power:	1
Beta:	0.050		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.259 \pm 0.167	N/A
U-234	0.27 \pm 0.121	N/A
U-238	0.247 \pm 0.087	N/A

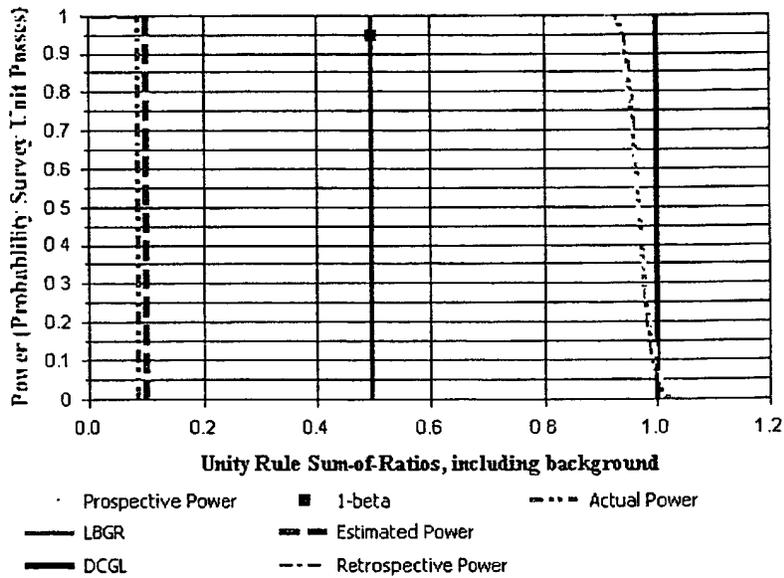


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell
Survey Unit Name: SU07 Interval 2 01
Report Number: 1
Survey Unit Samples: 22
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
29463	S	0.74	0.64	0.46
29222	S	0.22	0.32	0.3
29355	S	0.15	0.34	0.3
28763	S	0.21	0.4	0.3
29677	S	0.21	0.24	0.25
29085	S	0.37	0.39	0.32
29553	S	0.25	0.42	0.39
28916	S	0.29	0.31	0.34
29269	S	0.25	0.3	0.27
29732	S	0.22	0.27	0.29
29039	S	0.73	0.27	0.26
29416	S	0.18	0.25	0.22
28525	S	0.27	0.26	0.21
29636	S	0.22	0.25	0.18
28979	S	0.3	0.23	0.23
29320	S	0.18	0.16	0.19
29814	S	0.12	0.15	0.11
29144	S	0.12	0.14	0.16
28475	S	0.22	0.17	0.23
29586	S	0.15	0.22	0.13
28858	S	0.1	0.11	0.12
29516	S	0.18	0.12	0.18

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
29463	S	0.29
29222	S	0.09
29355	S	0.07
28763	S	0.09
29677	S	0.08
29085	S	0.15
29553	S	0.11
28916	S	0.12
29269	S	0.1
29732	S	0.09
29039	S	0.27
29416	S	0.07
28525	S	0.11
29636	S	0.09
28979	S	0.12
29320	S	0.07
29814	S	0.05
29144	S	0.05



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28475	S	0.09
29586	S	0.06
26858	S	0.04
29516	S	0.07



DQA Surface Soil Report

Basic Statistical Quantities Summary

<u>Statistic</u>	<u>Survey Unit</u>	<u>Background</u>	<u>DQO Results</u>
Sample Number	22	N/A	N=13
Mean (SOR)	0.10	N/A	0.1
Median (SOR)	0.09	N/A	N/A
Std Dev (SOR)	0.06	N/A	0.06
High Value (SOR)	0.29	N/A	N/A
Low Value (SOR)	0.04	N/A	N/A

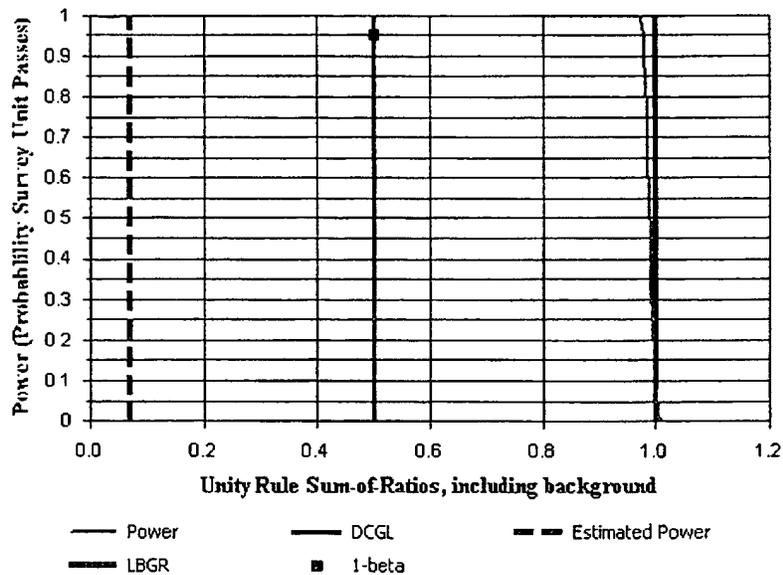


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI - Hicksville Site		
Planner(s):	Shane Brightwell		
Survey Unit Name:	SU07 Interval 3 02		
Comments:	SU07 Interval 3 Run 02		
Area (m ²):	1,411	Classification:	2
Selected Test:	Sign	Estimated Sigma (SOR):	0.02
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.07
Alpha:	0.050	Estimated Power:	1
Beta:	0.050		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	N/A
U-234	50.00	N/A	N/A	N/A	N/A
U-238	50.00	N/A	N/A	N/A	N/A

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.185 \pm 0.052	N/A
U-234	0.193 \pm 0.056	N/A
U-238	0.174 \pm 0.05	N/A

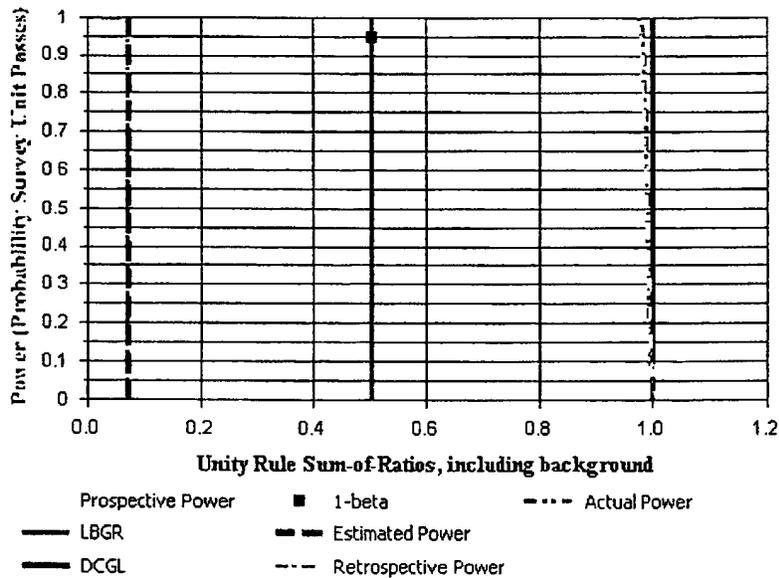


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI - Hicksville Site
Planner(s): Shane Brightwell
Survey Unit Name: SU07 Interval 3 02
Report Number: 1
Survey Unit Samples: 22
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
29474	S	0.21	0.22	0.15
29237	S	0.14	0.23	0.17
29363	S	0.11	0.19	0.18
28772	S	0.23	0.15	0.14
29692	S	0.17	0.34	0.26
29099	S	0.18	0.22	0.18
29561	S	0.17	0.2	0.18
28929	S	0.13	0.17	0.22
29283	S	0.21	0.32	0.31
29746	S	0.22	0.21	0.16
29047	S	0.11	0.17	0.11
29430	S	0.16	0.2	0.17
28538	S	0.23	0.12	0.17
29649	S	0.15	0.17	0.14
28994	S	0.35	0.23	0.24
29334	S	0.2	0.16	0.18
29833	S	0.18	0.16	0.18
29162	S	0.23	0.17	0.11
28487	S	0.17	0.14	0.14
29599	S	0.23	0.21	0.18
28875	S	0.13	0.11	0.09
29531	S	0.16	0.15	0.16

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
29474	S	0.08
29237	S	0.06
29363	S	0.05
28772	S	0.09
29692	S	0.07
29099	S	0.07
29561	S	0.07
28929	S	0.05
29283	S	0.09
29746	S	0.08
29047	S	0.05
29430	S	0.07
28538	S	0.09
29649	S	0.06
28994	S	0.13
29334	S	0.08
29833	S	0.07
29162	S	0.09



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
28487	S	0.07
29599	S	0.09
28875	S	0.05
29531	S	0.06



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	22	N/A	N=13
Mean (SOR)	0.07	N/A	0.07
Median (SOR)	0.07	N/A	N/A
Std Dev (SOR)	0.02	N/A	0.02
High Value (SOR)	0.13	N/A	N/A
Low Value (SOR)	0.05	N/A	N/A

PHASE I SOIL REMEDIATION REPORT

**FORMER SYLVANIA ELECTRIC PRODUCTS
INCORPORATED FACILITY**

HICKSVILLE, NEW YORK

SITE NUMBER V 00089-1

*Prepared by
URS Corporation
and
Envirocon, Inc.*

For:
**GTE Operations Support Incorporated
One Verizon Way VC34W453
Basking Ridge, NJ 07920**

December 2006

TABLE OF CONTENTS

	LIST OF ABBREVIATIONS, ACRONYMS, AND SITE TERMS.....	v
	NEW YORK STATE PROFESSIONAL ENGINEER CERTIFICATION, RADIATION SAFETY OFFICER CERTIFICATION AND CERTIFIED HEALTH PHYSICIST CERTIFICATION	ix
	EXECUTIVE SUMMARY	xi
1.0	INTRODUCTION.....	1
2.0	BACKGROUND	2
2.1	SITE HISTORY	2
2.2	FORMER NUCLEAR FUEL FABRICATING OPERATIONS	3
2.3	SITE USE PRIOR TO PHASE I SOIL REMEDIATION	4
2.4	SITE PHYSIOGRAPHY AND LAND USE.....	4
2.5	GEOLOGICAL CONDITIONS	5
2.6	HYDROGEOLOGICAL CONDITIONS.....	6
2.7	REGULATORY AUTHORITY.....	6
3.0	OBJECTIVE	11
4.0	PROJECT TEAM.....	12
5.0	NATURE AND EXTENT OF CONTAMINATION.....	13
5.1	SITE CHARACTERIZATION	13
6.0	REMEDIATION PROGRAM DESIGN	15
6.1	HEALTH AND SAFETY PROGRAM.....	15
6.2	EXCAVATION PLAN.....	15
6.2.1	<i>Site Preparation.....</i>	<i>15</i>
6.2.1.1	Asbestos	16
6.2.1.2	Grid System.....	17
6.2.1.3	Sheet Pile and Helical Piles.....	17
6.2.1.4	Vibratory Monitoring	18
6.2.2	<i>Community Air Monitoring Program.....</i>	<i>19</i>
6.2.3	<i>Excavation Enclosures and Air Handling Systems.....</i>	<i>21</i>
6.2.3.1	Excavation Enclosures.....	21
6.2.3.2	Air Handling Systems	21
6.2.3.3	Air Quality Monitoring.....	22
6.2.3.3.1	Photoionization Monitoring for Volatile Organic Compounds	22
6.2.3.3.2	RAM Monitoring for Particulates	22
6.2.3.3.3	Compound-Specific Sampling for Volatile Organic Compounds	22
6.2.3.3.4	Sampling for Radioparticulates.....	23
6.2.3.3.5	Results.....	23
6.2.4	<i>Site Surveying</i>	<i>23</i>
6.2.4.1	Laser Positioning System	23
6.2.4.2	Global Positioning System	24
7.0	EXCAVATION AND SAMPLING PROGRAM EXECUTION	25
7.1	SUMMARY.....	25
7.2	ANOMALIES	28

7.3	SCREENING AND SAMPLING PROTOCOLS.....	28
7.3.1	<i>Sample Screening Process for Radioactivity</i>	28
7.3.2	<i>Sample Screening Process for Volatile Organic Compounds</i>	29
7.3.3	<i>Sample Categories</i>	29
7.4	SAMPLE COLLECTION.....	30
7.4.1	<i>Augering</i>	33
7.5	SAMPLE AND WASTE TRACKING.....	34
7.5.1	<i>Barcode System</i>	34
7.5.2	<i>Chain of Custody</i>	35
7.6	SAMPLE PREPARATION AND ANALYSIS.....	35
7.6.1	<i>Radiological Constituents</i>	36
7.6.1.1	On-Site Analysis (Gamma Spectroscopy).....	36
7.6.1.2	Off-Site Analysis (Severn Trent Laboratories, Inc.).....	36
7.6.2	<i>Volatile Organic Compounds and Metal Constituents</i>	36
7.6.2.1	On-Site Analysis (Stone Environmental, Inc.).....	36
7.6.2.2	Off-Site Analysis (Severn Trent Laboratories, Inc.).....	37
7.7	DATA MANAGEMENT AND VALIDATION.....	37
7.7.1	<i>Data Management</i>	37
7.7.2	<i>Data Validation</i>	37
7.8	SAMPLE MANAGEMENT AND ARCHIVING.....	38
7.9	BACKFILL.....	39
7.10	CELL STATUS REPORTS.....	39
8.0	MARSSIM EVALUATION.....	41
8.1	PHASE I STATUS SURVEY PROCESS.....	41
8.2	SURFACE SCANNING.....	42
8.2.1	<i>Survey Instrumentation</i>	42
8.2.2	<i>Walkover Survey</i>	42
8.2.3	<i>Survey Interpretation</i>	43
8.2.3.1	Cumulative Frequency Distribution Analysis of Walkover Survey Data.....	43
8.2.3.2	Posting Plot Analysis of Walkover Survey Data.....	43
8.3	SAMPLING COMPONENT.....	43
8.3.1	<i>Area Classification</i>	44
8.3.2	<i>Statistical Test Selection</i>	44
8.3.3	<i>Number of Data Points and Grid Spacing</i>	44
8.3.4	<i>Data Assessment and Interpretation</i>	44
8.4	CONSERVATISM OF THE STATUS SURVEY DESIGN.....	45
9.0	SHIPPING AND DISPOSAL.....	46
9.1	RADIOLOGICAL SURVEYS.....	46
9.1.1	<i>Lift Liners™</i>	46
9.1.2	<i>Intermodals</i>	46
9.1.3	<i>Sea Land Containers</i>	46
9.1.4	<i>Rail Spur</i>	46
9.2	WASTE CATEGORIES.....	47
9.2.1	<i>Solid Wastes</i>	47
9.2.1.1	Radioactive Waste.....	47
9.2.1.2	Spent Carbon.....	47
9.2.1.3	Mixed Waste.....	48
9.2.2	<i>Liquid Waste</i>	48
9.2.2.1	Baker Tank Non-Hazardous Wastewater.....	49
9.2.2.2	Methanol Waste.....	49
9.2.2.3	Hazardous Liquid Waste.....	49
9.3	DOCUMENTATION/MANIFESTING.....	50
9.4	WASTE TRANSPORTATION.....	50
10.0	PHASE I COMPLETION.....	52

10.1	PHASE I SURVEY RESULTS	52
10.1.1	COMPASS Software Report Description.....	53
10.1.1.1	COMPASS SOFTWARE Site Report.....	54
10.1.1.2	COMPASS SOFTWARE Surface Soil Survey Plan.....	54
10.1.1.3	COMPASS SOFTWARE DQA Surface Soil Report	54
10.2	SHEET PILE REMOVAL/DECONTAMINATION	54
10.3	RAIL SPUR GAMMA WALKOVER SURVEY	55
10.4	OTHER SITE INVESTIGATIONS	55
10.4.1	Subsurface Soil Investigations	55
10.4.2	Historic Leach Pools Investigation.....	57
10.4.3	Site Hydrologic and Geologic Characteristics	58
11.0	CONCLUSIONS	59
12.0	REFERENCES.....	60

LIST OF TABLES

Table 1	Site Organization Chart.....	12
Table 2	Monitoring Systems	19
Table 3	Excavation and Backfill Summary.....	26
Table 4	Samples Exhibiting Constituents Above the Cleanup Levels	27
Table 5	Explanation of Sample Designators	30
Table 6	Wastes by Category, Profile, and Quantity	51
Table 7	Summary of Phase I Assessment for Individual Cells	53

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	General Remediation Areas 2003
Figure 3	Site Conditions with Historic Overlays
Figure 4	Boring Locations 1997 - 2004
Figure 5	Original Cell Configuration Excavation Areas
Figure 6	Final Cell Configuration Excavation Area
Figure 7	Excavation Sheet Pile Locations
Figure 8	Completed Remediation Areas 2004
Figure 9	Anomalies All Cells
Figure 10	Site ABCD Soil Sampling Protocol

APPENDICES

Appendix A	Summary of Training and Monitoring
Appendix B	Cell Status Reports
Appendix C	Photographs
Appendix D	Data Validation and Data Management
Appendix E	Soil Boring Logs
Appendix F	Electronic Copy of this Report on CD

LIST OF ABBREVIATIONS, ACRONYMS, AND SITE TERMS

ACBM	asbestos-containing building materials
AEA	Atomic Energy Act
AEC	Atomic Energy Commission
ALARA	As Low As Reasonably Achievable
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
Be	beryllium
BF	sample designator type, backfill soil (on Site)
BG	sample designator type, backfill soil (off Site)
bgs	below ground surface
BS	sample designator type, backfill soil (on Site, removed and staged)
C	sample designator category, chemical
CAMP	Community Air Monitoring Plan or Community Air Monitoring Program
CHP	Certified Health Physicist
CF	sample designator type, confirmation
CFD	cumulative frequency distribution
CFR	Code of Federal Register
cis-1,2-DCE	cis-1,2-dichloroethene
CH	sample designator type, characterization
cm/sec	centimeters per second
cpm	counts per minute
CPR	cardiopulmonary resuscitation
COMPASS	Computerization Of the MARSSIM for Planning and Assessing Site Surveys
CV	sample designator type, confirmation / verification
DCGLs	derived concentration guideline levels
DL	sample designator type, delineation
DQA	data quality assessment
DR	sample designator type, drainage sample
eV	electron volts
EX	sample designator type, extra sample
f/cc	fibers per cubic centimeter
ft ²	square feet (square-foot)
ft ³	cubic feet
ft ³ /min	cubic feet per minute
FS	sample designator type, field sample
GC/MS	gas chromatograph / mass spectrometry
GCDR	Nassau County Golf Course Driving Range
GERT	General Employee Radiological Training
GIS	geographic information systems
GPR	ground penetrating radar
GPS	global positioning system
GTEOSI	GTE Operations Support Incorporated
HASL	Health and Safety Laboratory Method
HASP	Health and Safety Plan

LIST OF ABBREVIATIONS, ACRONYMS, AND SITE TERMS

HAZWOPER	Hazardous Waste Operations and Emergency Response Standard
HEPA	high efficiency particulate air (filter)
H&S	Health & Safety™
ICR	Industrial Code Rule
ID	inside diameter
in/sec	inch per second
IP	industrial packaging
KD, K _d	distribution coefficient
Lbs	pounds
LDR	land disposal restriction
LLRW	low level radioactive waste
LPH	leaching pool historic
LPS	laser positioning system
MARSSIM	Multi Agency Radiation Site Survey Investigation manual
MCL	Maximum Contaminant Level
MDA	minimum detectable activity
mg/kg	milligram per kilogram
mrem	millirem
mrem/hr	millirem/hour
mrem/yr	millirem/year
msl	mean sea level
mps	meter per second
N	The minimum number of soil samples in a survey unit to demonstrate that the MARSSIM-based analysis is statistically significant.
N	sample designator category, nickel
NAD83	North American Datum of 1983
NaI	sodium iodide
NAS	National Academy of Sciences
NCDOH	Nassau County Department of Health
NCDPW	Nassau County Department of Public Works
Ni	nickel
NORM	naturally occurring radioactive materials
NRC	Nuclear Regulatory Commission
NY&ARW	New York and Atlantic Railway
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDEL	New York State Department of Labor
NYSOT	New York State Department of Transportation
OSHA	Occupational Safety and Health Administration
PC	personal computer
PCB	polychlorinated biphenyls
PCE	tetrachloroethene

LIST OF ABBREVIATIONS, ACRONYMS, AND SITE TERMS

pCi	picoCurie or picoCuries
pCi/g	picoCuries per gram
pCi/L	picoCuries per liter (air or water concentration for radionuclides)
PID	photoionization detector
PM-10	particulate matter measuring up to 10 micrometers in size
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	quality assurance and quality control
R	sample designator category, radiological
RAM	real-time aerosol monitor (dust meter)
RM	radiation measurement
RML	radioactive materials license
RWPR	radioactive waste profile records
RWT	radiological worker training
SAIC	Science Applications International Corporation
SNM	special nuclear material
SOP	standard operating procedure
SOR	sum of ratios
SP	sample designator type, sample point sample
SSSAP	Subsurface Soil Sampling and Analysis Plan
SU	survey unit
SVOCs	semi-volatile organic compounds
TAGM	Technical and Administrative Guidance Memorandum (New York State)
TAL	target analyte list
TCE	trichloroethene
TCLP	toxicity characteristic leaching procedure
Th-232	thorium 232
TO-15	laboratory test for Toxic Organics in air
TPH	total petroleum hydrocarbons
U-234	uranium 234
U-235	uranium 235
U-238	uranium 238
µg/kg	micrograms per kilogram
µg/m ³	micrograms per cubic meter
µg/L	micrograms per liter
USCS	Unified Soil Classification System
USDOE	United States Department of Energy
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USRADS	Ultrasonic Ranging and Detection System
UST	underground storage tank

LIST OF ABBREVIATIONS, ACRONYMS, AND SITE TERMS

VCA	(New York State) Voluntary Cleanup Agreement
VF	sample designator, verification sample
VOC	volatile organic compound
WAC	Waste Acceptance Criteria
WS	sample type designator, waste sample
XRF	X-ray fluorescence
yds ³	cubic yards
Z	sample designator category, chemical and nickel

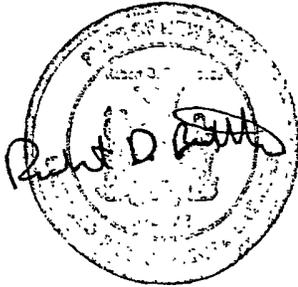
NEW YORK STATE PROFESSIONAL ENGINEER CERTIFICATION

I certify that I am a Professional Engineer registered in accordance with New York State Education Law - Title VIII, Article 145, Section 7206, and that applicable portions of the technical document and associated work comply with standard professional practices governing the profession.

In accordance with Title VIII, Article 145, Section 7209.2, it is a violation of this law for any person, unless acting under the direction of a licensed professional engineer or land surveyor, to alter an item under seal in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

I have reviewed this report and I am in agreement with the conclusions.

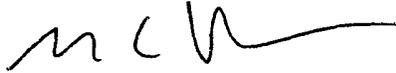
URS Corporation - New York



Robert D. Brathovde, P.E.
Engineer of Record
P.E. # 075972

RADIATION SAFETY OFFICER CERTIFICATION

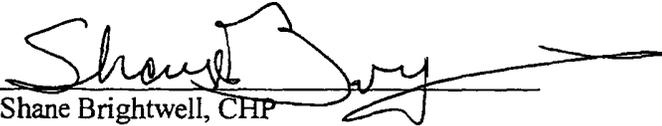
I have reviewed this report and the included radiological analysis results and I am in agreement with these conclusions.



Richard C. Hafner, Radiation Safety Officer
Envirocon, Inc.

CERTIFIED HEALTH PHYSICIST CERTIFICATION

I have reviewed this report and the included radiological analysis results and I am in agreement with these conclusions.



Shane Brightwell, CHP
President, Professional Radiation Consulting, Inc.

EXECUTIVE SUMMARY

This report documents the soil remediation (Phase I) at the Former Sylvania Electric Products Incorporated (Sylvania) Facility (the "Site") in Hicksville, New York. While the Site is currently subdivided into three lots known as 70, 100, and 140 Cantiague Rock Road, it was all part of the Sylvania operation in the 1950s and 1960s. Beginning in 1952, Sylvania used the Site to fulfill contracts with the U.S. Atomic Energy Commission (AEC) and the AEC's prime contractors for the production of nuclear fuel elements and components comprised of thorium, natural and enriched uranium, and aluminum alloys. Residual soil contamination created by operations conducted in support of these contracts includes uranium (U-238 and U-234), thorium (Th-232), tetrachloroethene (PCE), and nickel (Ni). In the fall of 1958, Sylvania constructed a separate building primarily to support enriched uranium work performed under an AEC license (Building #4). In 1966, the production of nuclear fuel elements and components at the facility ceased. In 1966 and 1967, the Site was radiologically decontaminated, decommissioned, and released for unrestricted use by both the AEC and New York State regulatory authorities.

In April 1999, GTE Operations Support Incorporated (GTEOSI) entered into a Voluntary Agreement (VA) with the New York State Department of Environmental Conservation (NYSDEC), for the investigation of the Site. The investigation of Site soils identified concentrations of U-238, U-234, Th-232, PCE, TCE and Ni. Investigation results supported the development of a conceptual model, which defined the approximate volume of soil impacted at the Site with these radiological and chemical constituents.

In January 2003, GTEOSI entered into a Voluntary Cleanup Agreement (VCA) with NYSDEC for Site soil remediation. Soil cleanup levels were established for these constituents and approved by NYSDEC. The Site remediation program is defined in the *Comprehensive Soil Remediation Program Work Plan, Former Sylvania Electric Products Facility, Hicksville, New York, January 18, 2002 (Revision 5: June 2003)* (URS, et. al. 2003) (Work Plan). The Work Plan is incorporated by reference into the Site remediation contractor, Envirocon, Inc.'s (Envirocon), New York State Radioactive Materials License Number 3095-4330. Soil remediation focused on areas east and south of the buildings located on the 140 and 100 Properties, and between the buildings located on the 100 and 70 Properties. In addition, some of the remedial activities included soil removal from areas located immediately off Site to the east, on the Nassau County Golf Course Driving Range (GCDR) property. The Work Plan divided the excavation work into separate cells or areas. The Phase I soil remediation activities ended on September 23, 2004.

Excavation and sampling results are documented in individual Cell Status Reports (Appendix B). Each report contains a statement addressing the attainment of cleanup levels and lists exceptions to attainment of these levels. The reports provide the depths of excavation, the details of the gamma radiation walkover survey after excavation, the results of verification sample off-Site analyses including results of the radiological sample evaluation performed in accordance with the guidance provided in the *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM), and the on-Site analysis results for subsurface soil sampling.

A Community Air Monitoring Program was established and maintained throughout the excavation and soil management activities. No exceedences were measured due to Site activities throughout the project.

During this soil remediation, a total of 194,733,449 pounds (approximately 97,000 tons) of soil was excavated and shipped from the Site for proper disposal. Because the uranium was generally found in veins, clean soil was necessarily removed during the Phase I soil remediation to access and remove the veins of material.

Isolated areas of residual uranium remain above Site cleanup levels [50 picoCuries per gram (pCi/g) for U-234 and 50 pCi/g for U-238] in Cell 1 (subcell U05), Cell 9 (subcell E20) and Cell 13 (subcell J25). Some residual Th-232 remains in the soils above the Site cleanup level (2.8 pCi/g above background concentrations) in Cell 9 (subcell H21). However, some residual contamination was located at or below the allowable excavation depth for the Phase I soil remediation project design and was limited to discrete areas.

Some residual PCE was found to remain in the soil above Site cleanup level (1.82 mg/kg) in Cell 4 (subcells V16 and W16). Residual Ni concentrations remain in the soil above the Site cleanup level (560 mg/kg) in Cell 9 (subcells E20, G20, and G21).

Other soil impacts detected through investigations conducted after the Phase I soil remediation and the subsequent findings are the subject of separate reports submitted to NYSDEC under separate cover. A summary and listing of these reports are included in Section 10.4 of this document.

Only a partial investigation and remediation of soils located on the 70 Property was conducted during Phase I because property access was limited due to an existing manufacturing operation. Investigation of this property along with remediation of areas beneath the existing buildings on the 100 and 140 Properties and the residual constituents noted above are anticipated to be addressed in the future.

1.0 INTRODUCTION

This report documents the investigation and remediation of soils containing isotopes of uranium and thorium (U-238, U-234, and Th-232), chlorinated solvents [tetrachloroethene (PCE) and trichloroethene (TCE)], and nickel (Ni) above New York State Department of Environmental Conservation (NYSDEC) approved Site cleanup levels, at the Former Sylvania Electric Products Incorporated (Sylvania) Facility located at 140, 100 and 70 Cantiague Rock Road, Hicksville, New York (Figure 1). These three properties total 10.5 acres, and collectively, are referred to as the "Site".

The focus of the soil remediation, referred to herein as Phase I, was on areas east and southeast of the 140 Building, east, south and southeast of the 100 Building, and on areas northeast of the 70 Building (Figure 2). Remediation activities were performed in accordance with the *Comprehensive Soil Remediation Program Work Plan, Former Sylvania Electric Products Facility, Hicksville, New York, January 18, 2002 (Revision 5: June 2003)* (URS, et. al. 2003) (Work Plan). References to the Work Plan in the remainder of this report shall be references to this document unless otherwise stated.

GTE Operations Support Incorporated (GTEOSI) performed the soil remediation pursuant to a Voluntary Cleanup Agreement dated January 2003 and additional soil investigation pursuant to the Voluntary Agreement dated April 1999 for the Former Sylvania Electric Products Incorporated Facility.

2.0 BACKGROUND

2.1 SITE HISTORY

In 1952, Sylvania acquired the northern portion of the Site to fulfill contracts with the U.S. Atomic Energy Commission (AEC) and the AEC's prime contractors for the production of nuclear fuel elements and components comprised of thorium, natural and enriched uranium, and aluminum alloys. Chlorinated solvents were used in operations supporting these contracts. These operations were primarily performed in two buildings, located on property designated today as 140 and 100 Cantiague Rock Road. By late 1958, Sylvania had acquired an additional parcel to the south and constructed a separate manufacturing building, Building #4, primarily to support enriched uranium work performed under an AEC license. This building remains today on property designated as 70 Cantiague Rock Road, and was subsequently occupied by industrial tenants, the last of which continued operations during the Phase I investigation and remediation work.

In 1966, Sylvania decontaminated and decommissioned the building and grounds used to support the AEC contract operations and demolished the other associated buildings. Building #4 and the grounds supporting licensed activities were decontaminated and decommissioned in 1967. Neither Sylvania nor subsequent tenants or owner handled nuclear materials after that time. Both the contract and licensed activities were decommissioned in accordance with applicable regulations then in force. The New York State Department of Labor (NYSDOL), the nuclear licensing authority for New York State, and the AEC released the buildings and grounds for unrestricted use.

Between May 1966 and April 1969, most of the buildings, along with foundations, were removed. In the late 1960s, the Site was subdivided into three parcels with new lot numbers (140, 100, and 70 Properties), and the northern portion of the Site was transferred to Canway Company, Inc. in 1967. The one-story office and industrial building currently on the 140 Property was constructed in 1968. The building located on the 100 Property was constructed in 1983.

Circa 1968-1972, PRD Electronics, a subsidiary of Harris Intertype Corporation and Barson Composites, occupied Building #4, the only Sylvania building left standing on the 70 Property, under leases from Sylvania, for the purpose of manufacturing microwave and electronic test equipment. Sylvania's High Temperature Composites laboratory also occupied a portion of the building for its metallurgical operations. In 1972, Dewiant Corporation purchased Sylvania's High Temperature Composites Laboratory along with the 70 Property. Dewiant subsequently sold the high temperature composite business to Barson Composites in 1974 and the building and property to AT Realty Company in 1978. Air Techniques commenced operation in Building #4 in 1978 and shared the space with Barson Composites until 1981, when Barson Composites moved out. In 1986, during construction of a 30,000 square-foot (ft²) addition on the east side of Building #4, a cache of 57 buried drums was discovered. These drums, along with 80 to 90 cubic yards (yds³) of soil (containing primarily PCE and TCE), were removed from the area for off-Site disposal. This remediation activity was documented in a 1987 ERM-Northeast report (ERM

1987). The drum contents reportedly contained a mixture of silica, aluminum hydroxide, and water with trace levels of PCE. Monitoring of the groundwater at and around the 70 Property began in 1987 and continues.

In 1994 and 1995, the United States Department of Energy's (USDOE) Oak Ridge National Laboratory conducted reviews of the Site's decommissioning documents from the 1960s, as part of the Nuclear Regulatory Commission's (NRC) review of retired licenses in the United States. Based on those reviews, in 1996, the NRC conducted soil radiation surveys of the 140 Property. These surveys identified radiological exposure rates in excess of the NRC criteria for unrestricted use. In a letter dated March 21, 1997, NYSDOL reaffirmed that the inside of Building #4, the original Sylvania building on the 70 Property used for licensed operations, had no radioactivity levels above background (NYSDOL 1997).

NYSDEC subsequently requested that GTEOSI conduct an investigation due to the NRC's findings of residual radioactivity on the 140 Property. In February 1997, GTEOSI notified NYSDEC that it would voluntarily investigate conditions at the Site. From April 1999 to the present, GTEOSI investigated the Site under a voluntary agreement with NYSDEC. Site investigations performed by GTEOSI through Phase I soil remediation are summarized in Section 5.0.

2.2 FORMER NUCLEAR FUEL FABRICATING OPERATIONS

Sylvania's Site operations began in 1952 on what are now the 140 and 100 Properties and focused on nuclear fuel element production for use in the nation's weapons reactors primarily under a single contract with the AEC (known as "Contract 1293"). From 1952 until 1965, Sylvania handled natural (un-enriched) uranium under the contract for the production of fuel elements for the government. Contract 1293 was modified over time to require processing of thorium and enriched uranium fuel elements and components, as well as aluminum alloys. The raw material, finished product and equipment associated with the contract work were owned by the AEC. Contract 1293 operations ceased in 1966.

In 1957, Sylvania acquired the portion of the Site now referred to as the 70 Property and constructed Building #4 primarily to support activities under a Special Nuclear Material License from the AEC. Starting in late 1958, Building #4 was primarily used to fabricate nuclear fuel elements for commercial reactors, the AEC and other federal agencies, and AEC prime contractors. Licensed operations in Building #4 ceased in 1966.

Contract 1293 operations included discharges of radionuclide-containing wastes to at least two leaching pools and two cesspools. The operations also included the use of chlorinated solvents in connection with contract and licensed work. Sylvania discharged non-contact, equipment cooling water into leaching pools and basins, while liquid wastes from chemical cleaning baths were monitored and discharged to the septic system. Some waste products were sent off Site for disposal (greater than 0.5 grams per liter uranium) while other process residuals were disposed of in on-Site recharge basins, leaching pools, historic dry wells, or cesspools (circa 1959) (O'Brien & Gere 2000a). Figure 3 depicts the locations of these historic structures.

2.3 SITE USE PRIOR TO PHASE I SOIL REMEDIATION

In the late 1960s, the Site was subdivided into three parcels with new lot numbers. Today, these parcels are the 140 Property, 100 Property, and 70 Property. Prior to the beginning of the soil remediation, more than 95 percent of the 10.5-acre fenced Site was either paved or occupied by buildings as shown on Figures 3 and 4. The following discussion describes the Site prior to the implementation of soil remediation in 2003.

140 Property

The 140 Property is on the northern portion of the Site, immediately south of the Nassau County Department of Public Works (NCDPW). The property contains a 54,500-ft², one-story office and industrial building. The property is fenced and primarily paved with the exception of a small area on the east side that abuts the Nassau County Golf Course Driving Range (GCDR).

100 Property

The 100 Property is centrally located on the Site and consists of the fenced area enclosing an 80,100-ft² two-story building and paved parking lots. Three petroleum underground storage tanks (USTs) were located on the 100 Property. These USTs, two 2,000-gallon gasoline and one 10,000-gallon diesel, serviced by a pump island, were used to fuel a truck fleet operated by a subsequent property occupant. These USTs were registered, and during the Phase I remediation activities removed. A report of the removal activities entitled *USTs Removed from Service, 100 Cantiague Rock Road, Hicksville, NY*, dated September 15, 2003 was issued to NYSDEC (GTEOSI 2003c).

70 Property

The 70 Property, on the southern portion of the Site, consists of a 79,210-ft², one-story brick building and the associated land surrounded by fencing. The portion of the property not occupied by the building is paved and used for parking, driveways and storage. The western portion of the building is the only original Site building (historically Building #4) that remains.

2.4 SITE PHYSIOGRAPHY AND LAND USE

The Site is in Nassau County, west central Long Island in the western portion of Hicksville, New York (Figure 1). Regionally, the Site is on a glacial outwash plain. Topography becomes more varied northward near the Ronkonkoma and Harbor Hill moraines and associated ground moraine areas. No surface water bodies are found near the Site.

In general, the Site area is a mixture of areas consisting of industrial/commercial and public recreation properties. The Site is bounded by the NCDPW to the north. The GCDR is to the east. A property formerly owned by General Instrument, which is a Class 2 New York State listed inactive hazardous waste site, lies to the south of the Site. Cantiague Rock Road and commercial and industrial properties are to the west of the Site.

2.5 GEOLOGICAL CONDITIONS

This section presents the geology and hydrogeology encountered beneath the Site. The regional geology was presented in Section 4.7 of the Work Plan, and is briefly summarized below. The data in this section is based on published data as well as Site-specific data collected during the remediation and subsequent investigational activities. Three sedimentary geologic units lie beneath the Site including glacial deposits composed of the Ronkonkoma and/or Harbor Hill glacial outwash (Upper Glacial Aquifer), the Magothy Formation, and the Lloyd Sand Member of the Raritan Formation (Lloyd). Only one of these units (Upper Glacial) was encountered during the investigation as described below.

The regional geologic setting in Nassau County consists of unconsolidated geologic deposits overlying bedrock. The bedrock is approximately 855 feet below mean sea level (msl) near the Site (Kilburn 1979). The unconsolidated deposits consist of residual or weathered bedrock, sand, silt, clay, and gravel of alluvial or glacial origin. The unconsolidated deposits are subdivided into geologic units based on their stratigraphic position and similar characteristics, such as grain size distribution, sorting, porosity, composition of grains, and other unique characteristics.

The overburden on Site consists of outwash deposits likely generated from the erosion of the Ronkonkoma and/or Harbor Hill Moraines. The outwash deposits are classified as the Upper Glacial Aquifer of Pleistocene Age and were encountered from ground surface to the 64-foot sample. Based on Site boring logs, surficial deposits are fairly uniform, predominantly brown, fine to coarse sand with minor amounts of gravel and silt.

During excavation, fill materials and non-native sediments (in leach pool structures) were encountered from ground surface to depths ranging from less than 1 to approximately 25 feet below ground surface (bgs). Fill materials consisted of light brown-to-brown sand and various debris fragments such as bricks, pipe pieces, metal and wire fragments, and various sizes of concrete building and other structural remnants.

In areas where native soils remained at the surface, the upper units were primarily gray to brown sands interbedded with discontinuous silt units ranging up to a foot in thickness. Below a depth of 20 feet bgs, the Upper Glacial Aquifer consists of interbedded brown to tan and occasionally orange to yellowish brown sands and sandy gravel units. The subsurface soils were classified in general accordance with the Unified Soil Classification System (USCS). The sands were classified as well-graded, gravelly sands, with little to no clays to poorly graded, gravelly sands with little to no fines. These interbedded units do not exhibit continuity for an appreciable distance, that is, tens of feet. The sands are composed primarily of quartz with minor amounts of other minerals such as feldspars, micas, and trace amounts of mafic (ferromagnesian) minerals. The quartz grains are rounded to subrounded; most of the gravels are rounded to subrounded also and display an elongated, that is, ovoid shape. These upper units are loose to medium dense and display no cementation.

A notable sequence was encountered in most borings (deeper than the excavation depths) that consists of gray silty sands, silts, clayey silts, and silty clays. This sequence was found at depths ranging from 42 to 65 feet with discontinuous layers of silt and clay displaying thicknesses of

less than 1 inch to almost 5 feet and alternating with sand seams. However, the silty sand and silty clay seams do not appear to persist for appreciable distances, that is, tens of feet. Below the discontinuous silty sands and clay seams, the sand sequences described above continue to the bottom of the 64-foot samples. These lower sands are light brown to tan, moist, medium dense to dense and have occasional interbeds of medium-size gravel.

In general, the Upper Glacial Aquifer sands encountered during excavation and in the boring program have a low organic content (ranging from 0.0 to 1.2 percent organic content in 17 samples tested) and exhibit permeabilities when tested in the laboratory of 1.7×10^{-2} to 1.2×10^{-1} centimeters per second (cm/sec) based on two samples from the northwest portion of the Site and three samples from the northeast portion of Cell 14. These permeabilities are typical of sands (Freeze and Cherry, 1979). The silty sand and silty clay units exhibited a much lower permeability range (8.7×10^{-5} to 2.0×10^{-3} cm/sec) based on two samples from the northwest portion of the Site.

2.6 HYDROGEOLOGICAL CONDITIONS

Three aquifers exist within the unconsolidated deposits that underlie Nassau County. The Upper Glacial Aquifer, comprising the uppermost hydrogeologic unit, is approximately 75 feet thick with the upper 10-feet consisting of fill and recent deposits. Most recharge must infiltrate through the Upper Glacial Aquifer to reach the lower aquifers. Recharge, originating from precipitation migrates to the water table either directly or subsequently through dry wells, recharge basins, or other man-made facilities. Depth to water is believed to be approximately 72 to 74 feet bgs beneath the Site. Groundwater was not encountered during the remediation.

2.7 REGULATORY AUTHORITY

Voluntary Agreements

GTEOSI entered into two voluntary agreements with NYSDEC. The first Voluntary Agreement (VA) (Index # W1-0844-98-08) was signed on April 7, 1999 and provided for GTEOSI to perform an investigation. The second, a Voluntary Cleanup Agreement (VCA), Index # W1-0903-01-12, was effective on January 6, 2003. Under this agreement, GTEOSI agreed to set forth a process and implement activities designed to address in whole or in part environmental contamination at the Site.

Under the voluntary agreements, NYSDEC acts cooperatively with the New York State Department of Health (NYSDOH) and the Nassau County Department of Health (NCDOH) to provide oversight and review of Site remediation operations.

Radioactive Materials License

Operations involving radioactive materials at the Site were regulated by NYSDOL (on July 1, 2006, the Radiological Health Unit was transferred to the New York State Department of Health) under Part 38, "Ionizing Radiation Protection." The Site remediation contractor, Envirocon, Inc. (Envirocon) of Missoula, Montana, has been issued NYSDOL Radioactive Materials License (RML) Number 3095-4330, for radioactive material operations at the Site. Inspectors from NYSDOL regularly reviewed Site operations.

Part 380: Air Emissions of Radionuclides

The activities performed under NYSDOL RML are subject to Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 380, "Rules and Regulations for Prevention and Control of Environmental Pollution by Radioactive Materials" (Part 380). Under the Part 380 regulations, a permit is required to discharge radioactive material by ventilation or exhaust systems. On April 28, 2003, GTEOSI submitted an application to NYSDEC for emission of radioactive materials to the air to attain permit equivalency and compliance with the provisions of the Part 380 regulations. However, because the work was being performed under a VCA, NYSDEC advised GTEOSI in an April 28, 2003 letter that it was not required to obtain a permit but must comply with the substantive provisions of the Part 380 regulations.

Monthly reports of results from the emissions monitoring program were submitted to NYSDEC, NYSDOH, other state and local government agencies and various individuals. In addition, an annual report of the results of the emission monitoring and the estimated quantities and average annual concentration of each constituent were also submitted. There were no exceedences to report.

AIR-100 Form (NYCRR Part 201 Permit Equivalency):

Air Emissions of Volatile Organic Compounds and Particulates

An application for a NYCRR Part 201 permit equivalency, using the AIR-100 Form, was submitted to NYSDEC on May 10, 2002. NYSDEC used the estimated emissions that were provided on the AIR-100 form to perform air dispersion modeling using their Airguide-1 model. Using the modeled data, a limit of 3 parts per million (ppm) for stack emissions of PCE was proposed and agreed upon. On April 25, 2003, the AIR-100 form was revised and resubmitted to reflect the new excavation start date. NYSDEC accepted the form, along with the monitoring and sampling plans. The form was again modified on June 18, 2003 to account for the addition of a second enclosure and ventilation system.

The stack monitoring and sampling plan calls for stack emissions sampling every 14 days for PCE and related volatile organic compounds (VOCs), as well as continuous monitoring of the stack exhaust for total VOCs and particulate matter measuring up to 10 micrometers in size (PM-10) (see Sections 6.2.3.3 and 6.2.3.3.2).

Most excavation operations took place within excavation enclosures (Section 6.2.3.1). Each enclosure maintained negative atmospheric pressure and was ventilated at a minimum 4 air changes per hour during excavation. The ventilation system stack effluent was treated and sampled as required by the Work Plan. In addition, a *New York Department of Health Generic Community Air Monitoring Plan* (CAMP) was operational whenever intrusive Site activities occurred. The results of the monitoring and sampling were reported to NYSDEC monthly and are summarized along with the results of the CAMP in Sections 6.2.2 and 6.2.3.

Waste Generator Site Access Permit

The State of Utah authorizes waste generators, waste processors and waste collectors to deliver radioactive wastes to a land disposal facility located within the State of Utah by issuance of a

Site Access Permit. Site Access Permit Number 0205001352 was issued for the Envirocare of Utah, Inc. (Envirocare) facility.

Envirocare of Utah, Inc. Licenses

Envirocare of Utah, Inc. (Envirocare) is an NRC licensed and regulated private waste disposal facility designed specifically for Class A, low-level radioactive waste in Clive, Utah. Envirocare disposes of waste material in aboveground disposal cells that are in conformance with specifications created by the USDOE and the United States Environmental Protection Agency (USEPA) and meet Title 40 of the Code of Federal Regulations (CFR) Part 264 and the NRC disposal requirements. Envirocare holds multiple permits and licenses, including:

- A State of Utah Radioactive Materials License, with amendments, to receive, store, and dispose by land burial, radioactive material as specified in the License #UT 2300249;
- State issued Part B Permit to operate a hazardous waste treatment, storage, and disposal facility (USEPA Identification Number UTD 982598898);
- State issued Ground Water Quality Discharge Permit #UGW450005, with amendments; and
- 11e (2) Byproduct Material License #SMC-1559, with amendments, issued by the NRC.

There were six waste profiles established and approved for disposal of Site waste materials at Envirocare. These profiles are as follow:

- Profile 1 for low level radioactive waste (LLRW), naturally occurring radioactive material (NORM) [not to exceed NRC Class A Unstable for radioactive materials, not Special Nuclear Material (SNM)];
- Profile 2 for mixed waste not requiring treatment;
- Profile 3 for mixed waste requiring treatment;
- Profile 4 for SNM;
- Profile 5 for corrosives (treatment sample); and
- Profile 6 for corrosives (drums of liquid waste requiring treatment).

Profiles 5 and 6 were for the same waste stream. Profile 2 was never used.

USEPA Numbers

Hazardous wastes were disposed under the USEPA Identification Number NYD002036515. The USEPA Identification Number for the 100 Property (NYR000072546) was used for closing and removing the three USTs used by a subsequent occupant (GTEOSI 2003c).

NYCRR Part 381

Under Part 381, LLRW manifests must be filed with NYSDEC by the waste transporter, or their designee, for highway transport into, within, or through New York State regardless of the specific activity of the waste. Priority Transport Service, Inc. (Priority Transport) held the 381 Permit # 4A-288 under which LLRW was transported. On April 7, 2004, GTEOSI filed a letter with NYSDEC describing its plan for compliance with 6 NYCRR Part 381 "Low-Level Radioactive Waste Transport Permit and Manifest System". On April 29, 2004 (revised April 30, 2004), GTEOSI requested a variance from the 6 NYCRR Part 381 regulations on behalf of

Priority Transport. The variance was formally granted by NYSDEC on June 10, 2004. This variance removed the requirement to complete the NRC LLRW manifest forms (540/541) for each shipment from the Site to prevent duplicative paperwork.

Asbestos

As discussed in Section 6.2.1.1, asbestos roofing materials were removed from the 140 Building as part of the Site preparation activities. Prior to abatement work, NYSDOL Project Notification paperwork was filed. Abatement operations, abatement project monitoring, and abatement oversight services were performed in accordance with NYSDOL's Industrial Code Rule 56, (ICR 56) and the Applicable Variance No. 119.

Other local permits

Town of Oyster Bay permits were obtained for various Site activities including:

- Installation of the temporary drainage system;
- Assembly and erection of the two excavation enclosures;
- Excavation activities;
- Plumbing work;
- Alterations to the fire suppression water system in the 140 Building;
- Demolition and internal alterations of a portion of the 140 Building;
- Registration and removal of USTs with NCDOH;
- Installation of underpinning (helical piles) to the 100 Building and performance of restoration work; and
- Installation of the temporary guard booth.

Agency Review and Oversight

NYSDEC remained actively involved in the daily remediation operations and project decision-making process. In addition, both prior to and during the Site remediation, a number of communication tools and oversight methods were used to formally document the progress and keep the public informed including routine verbal and e-mail communication, Monthly Progress Reports, Public Meetings, Fact Sheets, Citizen Updates, and oversight by an independent consultant.

Monthly Progress Reports were completed and issued to NYSDEC, NYSDOH, other state and local government agencies and various individuals. The Monthly Progress Reports outlined the (1) actions taken toward achieving compliance during the previous month, (2) results of sampling and testing, and other data received or generated in the previous month, (3) reports and other deliverables completed and submitted during the previous month, (4) activities planned for the succeeding month, (5) status of completion of the work and encountered and anticipated delays, and (6) modifications to the Work Plan proposed to and approved by NYSDEC. This communication tool was key to allowing the remediation process to evolve and provide a process for approval of minor modifications to the Work Plan without formal re-issuance of the entire document [e.g., the August 2, 2004 NYSDEC letter to GTEOSI confirming the verbal approval during the May 5, 2004 Work Session to amend Appendix E (Characterization Sampling) and Appendix H (Gamma Spectroscopy Analysis and Quality Control Samples) of the Work Plan].

NYSDEC and NYSDOH sponsored public meetings prior to and throughout the remediation process. Meetings were held on April 26, 2001 for the Jericho Gardens Community at the Temple Beth Torah; on May 9, 2001 at the Woodland Elementary School; on December 11, 2002 at the Burns Avenue Elementary School; and on July 14, 2004 at the Hicksville Middle School. The meetings consisted of presentations by NYSDEC on the history of the Site, explanations of planned activities and descriptions of the project progress, and provided an opportunity for the public to ask questions regarding the Site. To further communications, NYSDEC, working cooperatively with NYSDOH and the NCDOH, published Fact Sheets and Citizens Updates describing Site activities as well as the status of the off-Site groundwater investigations. In addition, NYSDEC maintains two public document repositories for reports related to the Site remediation: the Hicksville Free Public Library (169 Jerusalem Avenue) and the Stony Brook NYSDEC office on the State University of New York Campus.

In addition to regular telephone and e-mail communications, the NYSDEC Site Program Manager frequently visited the Site during remediation and investigations to document findings and to discuss future actions. To support NYSDEC's field oversight program, the Department retained Dvirka and Bartilucci Consulting Engineers (D&B) of Woodbury, New York, as an independent consultant. D&B visited the Site three times a week during remediation to supplement the Department's oversight efforts. Their report, "*Remedial Construction Inspection Report, Former Sylvania Electrical Products Facility Site, Hicksville, New York,*" dated August 2004, is also available at the public document repositories noted above.

An integral part of NYSDEC's oversight of the remediation program was its independent radiological and chemical surveillance and sampling program. During the investigation, personnel from NYSDEC Radiation Management Division performed radiation surveys and biased sample collection (typically coinciding with completion of excavation of a cell). NYSDEC also collected samples for the analysis of chemical and metal constituents. The samples were analyzed by NYSDEC's contracted laboratory. NYSDEC used the survey data from these investigations in their decisions to approve subsequent proposed remedial activities such as backfilling of the excavated cells (see Section 7.9).

As work progressed, modifications to the Work Plan were requested and accepted by the agency for unanticipated conditions such as sampling tanks and anomalies, use of on-Site analytical screening methods [i.e., x-ray fluorescence spectroscopy (XRF)], approving of backfill materials, subsequent approval to backfill and cell closures, Part 380 equivalency, and other activities not included or approved under the original Work Plan.

3.0 OBJECTIVE

The objective of the remediation work was to remove and properly dispose of soils that were above Site cleanup levels for U-238, U-234, Th-232, PCE, TCE, and Ni and obtain approval for unrestricted future use of the Site. The soil cleanup levels approved by NYSDEC for the Site are as follows:

Radioactive materials (processed natural uranium, thorium, and associated radioactive progeny)

- Total Uranium: 100 picoCuries per gram (pCi/g) (radioactive levels provide appropriate protection for chemical toxicity of uranium)
- U-238: 50 pCi/g
- U-234: 50 pCi/g
- Th-232: 2.8 pCi/g above background concentration

Volatile organic compounds

- PCE: 1.82 ppm or milligrams per kilogram (mg/kg)
- TCE: 0.7 ppm

Metals

- Ni: 560 ppm

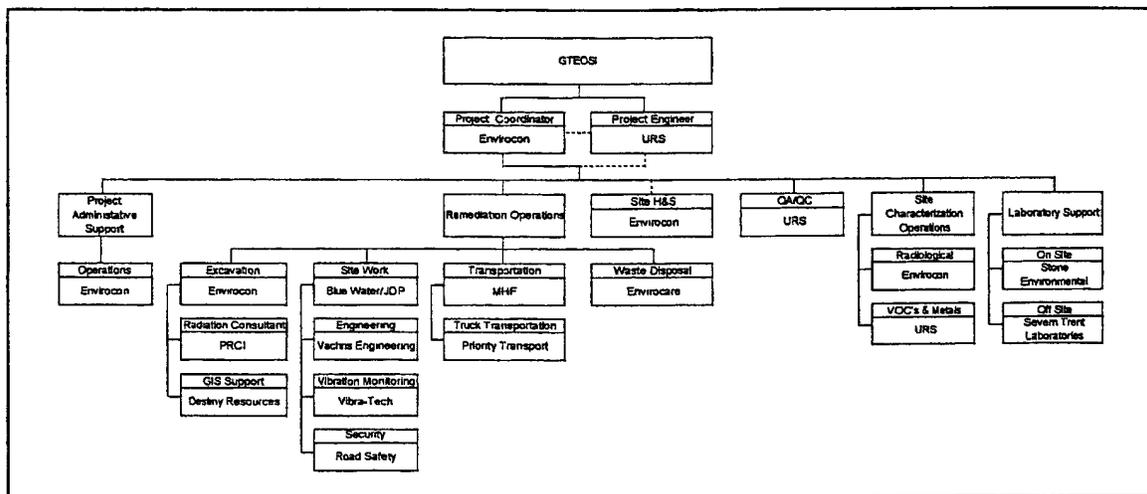
The work was performed in accordance with applicable local, State and Federal guidance and regulations, and has been subject to input from key stakeholders (i.e., the general public, owners of the Properties, adjacent property owners, and Site workers) throughout the process.

NYSDEC guidance for radiological cleanup identifies an As Low As Reasonably Achievable (ALARA) requirement (NYSDEC 1993). ALARA is a basic concept of radiation protection which specifies that radioactive contaminants and the exposure to ionizing radiation from them should be reduced as far below regulatory limits as is reasonably achievable considering economic, technological, and societal factors, among others. To ensure compliance with the identified radiological cleanup levels, and to implement the ALARA requirement, a field cleanup target of less than 50% of the uranium cleanup level was established for the Site excavations (i.e., U-234, 25 pCi/g and U-238, 25 pCi/g) and 50% of the Th-232 cleanup level plus the inferred Site background of 0.6 pCi/g (1.4 pCi/g plus 0.6 pCi/g for a total of 2.0 pCi/g). This target was considered reasonable in recognition of the heterogeneous distribution of contaminants at the Site, the enhanced reduction of residual contaminant remaining at the Site, and incremental costs of increased soil waste volume versus costs of re-excavating after backfill.

4.0 PROJECT TEAM

GTEOSI assembled and provided oversight of an experienced team that planned and executed the project as referenced in Table 1. URS Corporation (URS), the engineer of record, was responsible for engineering oversight and the radiological and chemical data collection. Envirocon held the Radioactive Materials License issued by NYSDOL, had the responsibility for the excavation, health and safety management, and radiological work. Professional Radiation Consulting, Inc. (PRCI) provided the Certified Health Physicist (CHP) of Record and radiological support. Destiny Resources, Inc. (Destiny) performed database management, Geographic Information System (GIS) support, and graphic design services. Both PRCI and Destiny were subcontractors to Envirocon. Blue Water Environmental, Inc. (Blue Water)/J.D. Posillico, Inc. (JDP) was responsible for sheet pile and underpinning installations, structural and civil engineering coordination, Site preparations including building alterations and storm water control, excavation support, waste loading, and Site restoration. Vachris Engineering P. C. performed the design for the helical piles installed for the 100 Building and sheet piles. Vibra-Tech Engineers, Inc. (Vibra-Tech) carried out vibration monitoring for the Site. Road Safety, Inc. (Road Safety) provided the Site security. Vachris Engineering, Vibra-Tech, and Road Safety were subcontractors to Blue Water. Stone Environmental, Inc. (SEI) conducted on-Site analysis for organic constituents and nickel in soil. Severn Trent Laboratories, Inc. (STL) in Earth City, Missouri, performed the off-Site verification analysis of Site soil samples as well as potential backfill and other requested analyses. MHF Logistical Solutions (MHF) was responsible for the transportation of the excavated materials from the Site to the disposal facility. MHF utilized the services of Priority Transport Services, Inc. (Priority Transport) for local transportation of the materials from the Site to the local rail spur. The disposal facility was Envirocare, located in Clive, Utah.

Table 1. Site Organization Chart



5.0 NATURE AND EXTENT OF CONTAMINATION

Prior to the initiation of the remediation program, extensive Site subsurface investigations were performed. Based on the data gathered from these investigations, an understanding of the nature and extent of contaminant distribution in Site soils (Figure 2) as well as a description of Site geology and hydrogeology were generated as discussed in Section 7.0 of the Work Plan.

5.1 SITE CHARACTERIZATION

During the initial phase of the investigation, surface sampling and testing were performed in addition to the advancement of approximately 400 soil borings at the Site to evaluate subsurface conditions. Investigations at the Site were performed over a period of several years (1997 to 2004) and include both non-intrusive and intrusive investigations (Figure 4).

Non-intrusive activities included:

- High-resolution ground penetrating radar (GPR) survey - conducted to evaluate the existence of subsurface structures and to assist in identifying subsequent surface and subsurface soil sampling locations (O'Brien & Gere 1998b);
- Ultrasonic ranging and data systems (USRADS) radiation survey - performed to define, to the extent practicable, the lateral extent of above-background gamma emitting radioactive materials that could indicate the presence of process residuals, particularly uranium and thorium progeny and to assist in identifying subsurface soil sampling locations (O'Brien & Gere 1998b);
- Site survey - conducted to identify the historic structures and produce a current map of the Site (O'Brien & Gere 2000a);
- Subsurface geophysical screening program - performed on the east side of the 140 Property and 100 Property to identify utilities and other subsurface structures (Dillon 2002); and
- Geophysical surveys - performed to identify underground utilities and anomalies (NAEVA 2003 and 2004).

Intrusive investigations included:

- Initial Investigation (1999) - installation of 128 soil borings [SB-001 through SB-109 (included 16 borings with multiple designations), SG-001, and BK-001 and BK-002] and the completion of five temporary wells (TW-01 through TW-05). Data collected [thorium, uranium, VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals] were used to evaluate the nature and extent of process residuals related to former Site use. The sampling of existing Site groundwater monitoring wells (MW-01 through MW-05) and three upgradient wells on NCDPW Property (W-24, W-24D and W-25) was also performed to evaluate the impact of process residuals and upgradient contaminants on the groundwater under the Site (O'Brien & Gere 2000b);

- Supplemental Investigation (2000) - performed to further evaluate areas identified during the Initial Investigation where process residuals (from previous manufacturing operations), consisting of U-238, Th-232, VOCs and Ni, were potentially located. These locations were characterized through the advancement of 68 soil borings [SB-110 through SB-170 (included several borings with multiple designations) and GT-1 and GT-2] and related soil sample analyses (O'Brien & Gere 2001);
- GCDR surface soil sampling program (2001) - conducted to confirm that radionuclides were not present (GTEOSI 2001);
- Excavation Test Program (2001) and a subsurface geophysical screening program - conducted on December 18 and 19, 2001, to better understand subsurface conditions that may affect project implementation, develop protocols for radioactivity field screening, and define the correlation between field instrument readings and soil concentrations of radionuclides (Envirocon 2002);
- Fall 2002 Investigation (2002) - advancement of 170 soil borings [U-1 through U-147 (includes several borings with multiple designations)] for steel sheet pile placement. Additional surface soil samples (GDCR-11 through GDCR-14) were collected at the GCDR to further evaluate radionuclide readings near sample location GCDR-1 (URS 2003a);
- Interim Drainage Investigation (2003) - installation of six soil gas survey points and six test pits (TP-1 through TP-6) to characterize the area proposed for use as the interim drainage system, plus the analysis of soil samples collected during the installation of the drainage system (GTEOSI 2003a); and
- Additional Soil Boring Program (2003) - advancement of 27 soil boring (U-148 through U-174) to aid in the characterization of potential mixed waste areas (URS 2003b).

Soils were screened in the field and samples were collected and analyzed for radionuclides, metals, PCBs, VOCs, and SVOCs. Initial investigations concluded that process residuals (radionuclides, VOCs, and Ni) were detected in subsurface soils.

Based on the data generated from these various investigations, a conceptual understanding of the distribution of the radionuclides, VOCs and Ni concentrations was developed and refined. These data were combined, summarized and modeled to help form the Predicted Excavation Extents used for Site remediation as discussed in Section 7.0 of the Work Plan and shown in Figure 2. The modeling involved interpolation and contouring of pre-remediation boring sample results using inverse distance weighting algorithms in ArcInfo software.

6.0 REMEDIATION PROGRAM DESIGN

The remediation program was designed in accordance with applicable local, State and Federal guidance and regulations. It defines the requirements for excavation, packaging, managing, transportation and disposal of soils exhibiting U-238, U-234, Th-232, PCE, TCE, and Ni above the Site cleanup levels. The details of the remediation program are presented in the Work Plan. The Work Plan is incorporated by reference into the Site's Radioactive Materials License Number 3095-4330. The appendices to the Work Plan also address quality assurance and quality control (QA/QC), health and safety (H&S) planning (including radiation safety training), traffic control, storm water management and erosion control, field sampling and analysis, excavation planning, Site security, air plant operations, monitoring and sampling, and excavation structure assembly and erection.

6.1 HEALTH AND SAFETY PROGRAM

Project Health and Safety (H&S) was critical to the successful implementation of the remediation program. To accomplish the project goal of no loss time injuries, a comprehensive H&S program was designed and implemented that included both classroom and practical field training for occupational, chemical, and radiological hazard awareness as described below. This Site-specific training supplemented the Hazardous Waste Operations and Emergency Response, first aid, and cardiopulmonary resuscitation training. Details of the H&S Training Program are found in Appendix A, Summary of Training and Monitoring.

6.2 EXCAVATION PLAN

Once the volume and distribution of impacted soils were estimated, an excavation plan and schedule were prepared. The excavation plan included Site preparation (utility management, demolition, and cell gridding), engineering (sheet pile and helical pile design and installation, and vibration monitoring), the acquisition and erection of excavation enclosures and air handling systems, and Site surveying. Further, since the manufacturing operations in the 70 Building could not be interrupted, coordination with occupant's management was critical to the planning process.

To ensure compliance with radiological cleanup criteria and to implement the ALARA requirement, a field cleanup target of less than 50% of each radioactive material cleanup level was established for Site excavations.

6.2.1 Site Preparation

Prior to beginning the soil excavation, significant Site preparation was required. This included securing proper permits, utility alterations to allow for renovations to the grounds and buildings such as removal of transformers at the 100 Building, rerouting and removal of select electrical lines, and modifications to the fire sprinkler system and temporary removal of select heating units in the 140 Building.

As part of the 140 Building alterations, the three eastern bays (approximately 7500 square feet) of the building were removed to allow for excavation and to address soil loads created due to the excavation near the building foundation (Appendix C, Photograph 1). This alteration included the removal and proper disposal of asbestos roofing materials (Appendix C, Photograph 2). Additional building modifications included construction of a negative pressure gamma spectroscopy room (Appendix C, Photographs 3 and 4), locker rooms, shower facilities, a sample preparation area, and a lunchroom. The 140 Building also housed SEI's laboratory analytical trailers (Appendix C, Photographs 5 and 6), sample preparation and storage/archive areas (Appendix C, Photographs 7 and 8) and a personal protective equipment supply cage.

Since the excavation would remove a portion of the existing drainage system, an interim drainage system was designed and installed between the 140 and 100 Buildings prior to initiation of the excavation work (Appendix C, Photographs 9 and 10). Additionally, to prepare for remediation of the eastern-most portion of the Site, the eastern Site fence was temporarily moved approximately 50 feet east onto the GCDR.

6.2.1.1 Asbestos

Asbestos work was done in two phases at the Site. The initial pre-demolition building inspection was conducted on the 140 Building eastern bay in December 2001 by a URS, New York State Department of Labor Class D Inspector (URS 2001). Results indicated that asbestos (chrysotile) was present in the roof vent and window caulking, roof edging, and roofing materials. As a result, these asbestos-containing building materials (ACBM) had to be removed prior to demolition.

Prior to abatement work, NYSDOL Project Notification paperwork was filed along with an abatement plan. Abatement consisted of the removal of the built-up roofing, roof flashing, and caulking from the eastern section of the roof of the building on the 140 Property. Abatement operations, abatement project monitoring, and abatement oversight services were performed in accordance with NYSDOL'S ICR 56 and the applicable variance No. 119. The work was conducted by Fiber Control, Inc., of 3010 Burns Avenue, Wantagh, New York, 11793, acting as a subcontractor for Iron Eagle Environmental Services. Fiber Control is a licensed NYSDOL asbestos removal contractor (License Number 99-0723). URS provided a licensed third party New York State Project Monitor.

Phase I of the asbestos work was conducted from February 25 through 27, 2003. The results of sampling indicated airborne concentrations of less than 0.01 fibers per cubic centimeter (f/cc) (<0.01f/cc). For more information, including copies of manifests and permits, see the *Asbestos Project/Air Monitoring During Asbestos Abatement at the Building Located at 140 Cantiague Rock Road, Hicksville, NY* Report (URS 2003c).

Phase II of the asbestos work was conducted from September 22 through 26, 2003. The results of sampling indicated airborne concentrations of less than 0.01 f/cc. For more information, including copies of manifests and permits see the *Asbestos Project/Air Monitoring During Asbestos Abatement – Phase II at 140 Cantiague Rock Road, Hicksville, NY* Report (URS 2003d).

ACBM was packaged in accordance with the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.1101, the United States Department of Transportation (USDOT) Standards 49 CFR Parts 171,172, and 173, the USEPA Standard 40 CFR Part 61 and NYSDEC regulations in relation to the transport, storage, and disposal of ACBM. The waste material was transported from the Site by Blue Water. ACBM was properly disposed and documented at 110 Sand Company's Clean Fill Disposal site, on Spagnoli Road, Melville, New York.

6.2.1.2 Grid System

The Site area outside the buildings with identified contamination, located primarily east of the buildings and between the 100 and 70 Buildings, was initially partitioned into 12 cells (Figure 5) separated by steel sheet piling (Appendix C, Photographs 11 and 12). After the start of remediation, several of the cells were reconfigured and the excavation area enlarged to include two additional cells for a total of 14 cells (Figure 6).

The cell configuration was established so that an entire cell could be excavated under an enclosure without requiring movement of the enclosure (see Section 6.2.3). The cells were further defined by subcells identified by letter-number combinations (Figures 5 and 6). Each cell and subcell was geographically surveyed and identified. Grid coordinates for each cell and subcell are linked to the identifiers in the Site GIS.

During subsequent investigations, the grid system was expanded to the west and south to cover the entire Site (Figure 7).

6.2.1.3 Sheet Pile and Helical Piles

Steel sheet pilings bound Cells 1 through 6, 10, and 11. Cells 7, 8, 9, 12, 13 and 14 were partially bound by an existing building, did not require separation from another cell, and/or did not require piling for structural support. The sheet pilings were constructed using Hoesch 1700K[®] steel sheets driven around the cell perimeters to approximately 40 feet below grade. This allowed for safe excavation to 24 feet, separation between each cell and a method of supporting the enclosure system. Figure 7 illustrates the locations of the steel sheet piles.

Modifications in the initial design of Cells 1 through 4 eliminated the need for internal bracing by using a tieback system to support the steel sheets, which aided in the openness of the cell allowing for ease of excavation. In Cells 9, 10, 11, and 12, special provisions were necessary to protect the adjacent walls and foundation of the 100 Building. The 100 Building is a tilt-up wall design, with shallow foundations and a 6-inch reinforced concrete floor. Because of this design, 54 helical piles were installed at the load points along the foundation on the building's eastern and southern sides to ensure the integrity of the structural components of the building prior to driving sheet pile near the structure and during the remediation (Appendix C, Photographs 13 and 14). Each pile was augered to a minimum depth of 30 feet and the bearing capacity of each pile was tested to ensure its ability to support the load. The piles were fixed to the building using Chance Anchors[®] and Dewi-Dag[®] connections. Once the piles were set and connected, the building load was transferred from the bearing soil to the helical piles. The helical piles were

installed under the supervision of a New York State licensed structural engineer from Vachris Engineering P. C. Due to the installation of these piles, the steel sheets placed along the perimeter of the building could only be driven to a maximum depth of 25 feet; this shallow sheet pile placement limited the depth of excavation in these areas to 16 feet bgs (allowable) to 24 feet bgs at a 1:1 angle of repose away from the foundation to ensure the building stability. Excavation along the south walls of Cells 9, 10 and 11 was allowable to 24 feet. In Cell 12 along the east wall of the building, engineering design provided for excavation to 12 feet.

As excavation proceeded, the steel sheet designs and cell configurations were re-engineered to allow for deeper excavations in certain cells as field conditions warranted. Cell 2 was redesigned for excavation depths to 35 feet bgs (Appendix C, Photograph 15). The revised design included additional bracing using "W" section beams. Cells 5 and 6 were reconfigured for an excavation depth of 40 feet and a total length of 170 feet. The width of the cells varied, Cell 5 being 50 feet wide and Cell 6 being 67 feet wide. To accomplish this, steel sheet piling was driven to an approximate depth of 55 feet. This shoring system required a top wale and an intermediate wale at 24 feet as well as a separate system to support the enclosure (Appendix C, Photographs 16, 17 and 18). To reach localized deep veins of contamination within Cell 5, a specially constructed shoring system was employed to allow for an excavation depth of 54 feet (Appendix C, Photograph 19). A roof structure was constructed over the Cell 5 area to protect the excavated area from the elements and allow for the entire cell to be enclosed. Cell 11 was excavated to 36 feet bgs along the south wall, which was accomplished through the use of a steel sheet box. Support bracing in Cell 11 was modified to replace corner braces with a strut. Cell 12 was redesigned to excavate to 22 feet bgs.

Approximately 96,000 square feet of steel sheet piling and approximately 460,000 pounds (lbs) of steel bracing materials were used to bound the excavation areas. A complete set of "As Built" drawings by Vachris Engineering P. C. that depict the initial steel sheeting designs as well as the redesigns that were used during excavation activities is archived on Site.

6.2.1.4 Vibratory Monitoring

In order to ensure that manufacturing operations in the 70 Building were not affected by vibrations created during the remediation program, Vibra-Tech carried out vibration monitoring for the Site from March 18, 2003 through October 31, 2004. Vibrations were monitored via seven vibration-monitoring seismographs equipped with triaxial sensors to record ground vibration produced by construction activities (i.e., sheet piling driving, excavation, etc.). Table 2 provides a summary of each recording location and description.

Table 2. Monitoring Systems

Location	Address	Description
1	70 Cantiague Rock Rd.	Interior. Computer Room. Sensor epoxied to the floor in midsection rear wall.
2	70 Cantiague Rock Rd.	Exterior. Front left outside engineering department. Sensor epoxied to asphalt and weighted.
3	70 Cantiague Rock Rd.	Exterior. Rear left outside warehouse. Sensor epoxied to asphalt and weighted.
4	100 Cantiague Rock Rd.	Exterior. In center of front wall. Sensor buried in the ground and weighted.
5	140 Cantiague Rock Rd.	Interior. Gamma Spectroscopy Lab. Sensor epoxied to the floor in rear left corner.
6	600 W. John Street	Exterior. 15 ft west of the 70 Building Annex side entrance. Sensor epoxied to pavement and weighted.
7	N/A	Non-fixed location. Moved to multiple locations adjacent to sheet pile activities.

Seismographs were monitored via a remote cellular monitoring system. Each seismograph was programmed to continuously record the highest peak vibration level in 15-second intervals during the hours of 0700 and 2200. The seismographs directly measured peak particle velocity in three mutually perpendicular planes of motion with a dynamic range up to 10 inches per second (in/sec). The system was calibrated internally prior to each recording and annually with a shake table calibration.

The results of the vibration monitoring are displayed in graphical format in the Vibra-Tech monthly reports. The results were compared to the limit of 1.0 in/sec for the adjacent structures and 0.23 in/sec for the equipment in the computer room of the 70 Building. With the exception of one vibration data point recorded inside the 140 Building on March 9, 2004, the recorded ground vibrations associated with the pile driving activities were in conformance with the vibration limits recommended for the project. The vibrations recorded on March 9, 2004 south of the Site at 600 West John Street were recorded at 0.06 in/sec, well below the project vibration limits. The comparable March 9, 2004 vibrations recorded within the 140 Building (1.23 in/sec) did not reach a level, considering the higher vibration frequency, which could cause cosmetic damage in the 140 Building (Dowding 1985). Seismograph records are included in the Vibra-Tech Report (2004).

6.2.2 Community Air Monitoring Program

The Community Air Monitoring Program (CAMP) was implemented during the remedial activities (NYSDOH 2000). CAMP results were included in the Air Monitoring Program Weekly Performance Reports of the Monthly Progress Reports submitted to NYSDEC. The CAMP monitored VOC and particulate emissions and was conducted during intrusive field activities to protect Site workers and the general public from exposure to emissions. As a complement to the CAMP, radioparticulate matter (U-238, U-234, Th-232, and total uranium) monitoring was performed at the CAMP stations to demonstrate compliance with 6 NYCRR Part 380.

The Site CAMP had four monitoring stations set up along the perimeter (the northeast, southeast, northwest, and southwest corners) of the work areas (Appendix C, Photographs 20 and 21). The locations were established based on the predominant wind directions, location of Site work activities, and Site boundaries. Wind direction and velocity were monitored by the on-Site weather station (Davis Vantage PRO®). The primary wind directions in the Hicksville area are south-southwest, southwest and northwest (AWS Truewind 2003). The monitoring station placement was provided in the Monthly Progress Reports.

Monitoring at each CAMP station included the use of a:

- MiniRAE 2000™ – A photoionization detector (PID) to detect VOCs;
- ThermoMIE DataRAM 2000 – A real-time aerosol monitor (RAM) used to measure total particulate matter less than 10 microns (respirable particles); and
- RadECo Sampling Pump – An air pump used to collect samples (at 2 cubic feet per minute (ft³/min)) to be analyzed for radioparticulates.

The monitoring data was electronically data-logged and manually recorded at 60-minute intervals. In addition, PIDs were connected to a remote transmitter that allowed real-time monitoring of VOC concentrations. The data could be viewed on a computer screen at intervals of 120 seconds. If a VOC concentration reached a set threshold value of 5 ppm, an alarm would sound. The DataRAMs were also equipped with an audio alarm, and electronically connected to a pager which would notify CAMP program personnel if instrumentation measured particulates of 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) or greater. The pager showed a code indicating which instrument sounded the alarm.

The instruments were placed at the stations daily, prior to start of intrusive work and were retrieved after work stopped for the day. The data was reviewed at the end of each day. Instruments were also monitored hourly throughout the day to ensure that the instruments were operating properly and that action levels were not exceeded.

Radioparticulate sampling was conducted continuously 7 days per week, 24 hours per day. The samples were collected and analyzed twice weekly with an alpha/beta scintillation counter on Site.

Results

CAMP stations had no exceedences based on Site activities. However, there have been instances in which environmental conditions (humidity, rain, snow, or temperature), outside sources (street sweepers, lawn mowers and diesel truck exhaust systems), or instrument malfunctions influenced the recorded results. These instances were reported to NYSDEC in the Air Monitoring Program Weekly Performance Reports part of the Monthly Progress Reports. The evaluation of these circumstances as spurious was corroborated by other station data, nearby environmental data, and backup instruments at the Site.

6.2.3 Excavation Enclosures and Air Handling Systems

To enable remediation operations to be performed uninterrupted during most weather conditions and to limit the potential for the release of VOCs and dust during excavation, two modular enclosures systems were assembled inside the Site boundary (Appendix C, Photographs 22, 23 and 24). Each enclosure was equipped with an air handling system operated to maintain an atmospheric pressure inside the enclosure that was slightly less than outside the enclosure (Appendix C, Photographs 25 and 26). Effectiveness of containment was measured using a differential pressure gauge, supplemented with monitoring of the enclosure openings as per American Society of Heating, Refrigeration, and Air-Conditioning Engineers, Inc. (ASHRAE) Standard 110-1995 (1995).

6.2.3.1 Excavation Enclosures

The excavation enclosures, made by Big Top Manufacturing of Perry, Florida, were fabric-covered metal frame structures with associated air locks. The structures were 60 feet wide by 120 feet long, rising to a height of 28 feet at the apex, while the adjacent air locks were 40 feet wide, 28 feet long and 19.5 feet high. Seams of the fabric cover were sealed to facilitate atmosphere management within the enclosures. The majority of the excavation activities took place within the enclosures (Appendix C, Photographs 27 through 34.).

6.2.3.2 Air Handling Systems

Each enclosure was equipped with an air handling system operated to maintain a negative pressure environment. They were assembled as five major components including a 10-foot by 24-foot skid containing the blower, baghouse filters, and high efficiency particulate-air (HEPA) filters; a generator; three 8-foot in diameter by 20-foot high carbon canisters (two operating and one on Site as a standby); and the associated 24-inch and 12-inch piping including the excavation enclosure connections. During system operation, physical degradation of the activated carbon granules led to slowly increasing particulate readings. This necessitated the installation of an after-filter to trap entrained carbon dust prior to stack release.

A negative pressure differential within the enclosures was maintained to control VOCs, exhaust fumes and dusts generated by the remedial activities. Air evacuated from the enclosure was pumped through HEPA filters and activated carbon vapor traps in the air handling system before being released to the atmosphere.

Baghouse filter, HEPA filter, and after-filter replacements were scheduled based on differential pressure increase across each unit. During routine replacement, these filters were removed, placed in plastic bags, and then placed into Lift Liners™ for disposal in accordance with Section 8.3 of the Work Plan. In addition, maintenance of the generators was based on the hours of operation as specified by the manufacturer.

Following completion of remediation activities, the air handling system was used to support decontamination activities including the control of particulates during the scraping and grinding

of the sheet piles. To accomplish this, the air plant ductwork was configured to provide local exhaust ventilation and filtration within the one enclosure used for these tasks.

6.2.3.3 Air Quality Monitoring

Continuous monitoring of the air handling system discharge confirmed that VOCs and dust were not released in excess of allowable limits. The monitoring demonstrated compliance with emission limits established from the AIR 100 Forms. Also in keeping with 6 NYCRR Part 380, stack radioparticulate sampling was performed for the air handling system. The types of monitoring and equipment used are detailed below. Field equipment was calibrated daily as per Section 6.2 of the Work Plan.

6.2.3.3.1 Photoionization Monitoring for Volatile Organic Compounds

A PID equipped with a 10.6 electron Volts (eV) lamp was used to measure VOCs in the air handling system discharge stream in real time. This ionization potential accounts for approximately 70 percent of the VOCs (including both PCE and TCE) on NYSDEC's Analytical Services Protocol Target Compound List. VOCs are detectable down to 0.1 ppm. The PID data was supported by air sample analytical results. A stack action level of 4 ppm on the PID was selected based upon estimated emissions reported on the NYSDEC AIR 100 Form. If this action level was exceeded, intrusive work would need to be stopped, and/or the air-handling unit would have to be shut down until the problem was identified and corrected.

6.2.3.3.2 RAM Monitoring for Particulates

A RAM was used to detect total PM-10 particulates (dust) in the air handling system discharge stream. The RAM was equipped with a PM-10 size-selective impactor, as well as a sample conditioning heater. The RAM was connected to an isokinetic sampling adapter installed in the air plant stack. The RAM measures total particulates by infrared laser nephelometry.

The action level for stack monitoring was 100 $\mu\text{g}/\text{m}^3$ of dust particulates sustained for 15 minutes. If readings were to reach this level, aggressive dust control (water fog spray) would be required inside the enclosure to reduce the readings. At 150 $\mu\text{g}/\text{m}^3$ sustained for 15 minutes, intrusive work would need to be stopped, and/or the air-handling unit would have to be shut down until the problem was identified and corrected.

6.2.3.3.3 Compound-Specific Sampling for Volatile Organic Compounds

Air sampling was conducted for Site-specific VOCs [a target list of 63 compounds that included PCE, TCE, *cis*-1,2-dichloroethene (*cis*-1,2-DCE), vinyl chloride, benzene, and carbon disulfide] in the stack and at the downwind perimeter at least once every 15 days. The samples were collected using passivated, evacuated SUMMA canisters and analyzed by a NYSDOH Environmental Laboratory Approval Program accredited laboratory (Galson Laboratories, Syracuse, NY) using USEPA Method TO-15 (USEPA 1999). Analysis was performed by gas chromatography/mass spectroscopy (GC/MS)

6.2.3.3.4 Sampling for Radioparticulates

A RadECo pump was used to collect samples in the air plant stacks. Radioparticulate sampling was conducted continuously while the air plants were in operation. The samples were collected and analyzed weekly with an alpha/beta scintillation counter on Site. This sample time was selected to ensure that a sufficient volume of air was sampled to meet the detection limit required for the Part 380 Permit.

6.2.3.3.5 Results

The stack monitoring and sampling showed no exceedences due to Site remedial activities. However, problems with the air handling system occurred infrequently during Phase I (April 2003 through September 2004). As discussed above in Section 6.2.3.2, an after-filter was installed to trap entrained carbon dust prior to stack release. Problems experienced included a false high reading of toluene, equipment malfunction due to humidity, and a filter blow out. An after-filter was also required to trap entrained carbon dust prior to stack release, as noted in Section 6.2.3.2. These instances were reported to NYSDEC in the Air Monitoring Program Weekly Performance Reports part of the Monthly Progress Reports. Problems were corrected immediately upon discovery, and no exceedences of Stack or CAMP action levels occurred.

6.2.4 Site Surveying

State Plane Monuments located in Cantiague Park, approximately 723 feet north of the northern boundary of the Site were used for geographical reference to establish a control point for the Site. By traversing from these monuments, a grid for the Site was developed and control points were marked and located based on this grid. Using the marked control points, the Vulcan Laser Positioning System (LPS) was able to geographically locate features both within the Site boundary and off Site (e.g., the rail yard). A Trimble Pathfinder Global Positioning System (GPS) was also used to geographically locate features when known control points were unavailable or accuracy requirements and outdoor conditions were suitable for the GPS.

The control points were located and recorded with coordinates referenced in State Plane Projection, Long Island Zone, North American Datum of 1983 (NAD83).

6.2.4.1 Laser Positioning System

When using the LPS, laser transmitters were set up across from each other at a distance between 30 and 100 feet. A technical section, made up of two sensors, was attached to a data logger that handled the processing and recording of the information coming from the laser transmitters (Appendix C, Photograph 35). The LPS system was calibrated by logging locations between the transmitters and then tying these locations to control points that had been previously geographically referenced by the surveyor. The locations were then able to be surveyed in and later transferred to a computer for mapping purposes.

The advantages of the LPS include its accuracy (sub-centimeter) and versatility (can be used indoors or outdoors). The disadvantages are that it requires established civil survey control

points, requires setup and calibration. The LPS was the primary system used on Site to identify sampling locations.

6.2.4.2 Global Positioning System

The GPS is a backpack system with a vertical antenna extending above the user's head to provide clear satellite reception. The GPS locates features by using multiple satellites to calculate a position on the earth. Changes to a location in the field can be made quickly and with sub-meter accuracy.

The GPS, while not as accurate as LPS, can be rapidly deployed and may be used without establishing civil survey control points. The disadvantages are it is less accurate than the LPS and it could not visually communicate with satellites inside the excavation enclosure. The GPS was used on Site if control points could not be located or accessed.

7.0 EXCAVATION AND SAMPLING PROGRAM EXECUTION

Excavation began on April 30, 2003 and was completed on September 23, 2004. Fourteen cells were excavated (Figure 8).

7.1 SUMMARY

The data set in Table 3 below lists the cells in order of start date and summarize their associated statistics (i.e., depth of excavation, amount of material removed, status, etc.). Refer to Appendix B, *Cell Status Reports*, for details on the excavation and verification information for each of these 14 cells.

Table 3. Excavation and Backfill Summary

Cell	Excavation			Material Removed		Backfill		Site Cleanup Levels Attained		
	Start	End	Range of Excavation Depths (ft bgs)	Pounds	Lift Liners™	Authorization	Completion	Rad	VOCs	Ni
1	4/30/03	6/10/03	7-25	10,970,003	506	6/13/03	7/07/03	Note 1	yes	yes
2	6/16/03	8/12/03	14-29	17,331,262	799	8/25/03	9/15/03	yes	yes	yes
13	7/07/03	7/16/03	0-8	5,190,386	255	7/16/03	7/18/03	Note 1	yes	yes
8	7/22/03	9/11/03	5-22	7,896,922	373	9/29/03	10/10/03	yes	yes	yes
4 ⁽²⁾	8/04/03	9/24/03	1-25	20,346,750	991	10/06/03	1/13/04	yes	Note 3	yes
	9/22/03	10/09/03				10/15/03	10/27/03			
7	8/05/03	10/06/03	0-24	11,689,650	557	10/06/03	10/21/03	yes	yes	yes
14 ⁽⁴⁾	10/02/03	12/10/03	0-12	11,224,230	573	10/21/03	3/08/04	yes	yes	yes
						11/04/03				
						12/03/03				
	5/14/04	5/18/04		128,030	7	5/19/04	5/20/04	yes	yes	yes
12	10/09/03	2/05/04	14-26	6,051,090	288	2/11/04	3/02/04	yes	yes	yes
11	10/21/03	2/05/04	16-36	17,308,660	812	2/11/04	3/29/04	yes	yes	yes
5	12/03/03	4/06/04	22-54	8,730,170	404	4/20/04	7/27/04	yes	yes	yes
6	12/11/03	5/12/04	3-42	29,310,930	1,357	5/19/04	7/27/04	yes	yes	yes
10	2/13/04	4/02/04	12-24	15,353,850	728	3/31/04	4/29/04	yes	yes	yes
3	4/12/04	5/11/04	16-24	13,505,000	625	5/18/04	6/09/04	yes	yes	yes
9	5/25/04	9/23/04 ⁽⁵⁾	0-43	17,173,570	791	8/05/04	9/02/04 ⁽⁴⁾	Notes 1 & 6	yes	Note 7

Notes:

- (1) U-238 Site cleanup level was not attained in Cell 1, subcell U05; Cell 9, subcell E20; and Cell 13, subcell J25.
- (2) Cell 4 was excavated and backfilled in two parts; but was verified as a single Survey Unit for the *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)* evaluation.
- (3) PCE Site cleanup levels were not attained in Cell 4, subcells V16 and W16.
- (4) Cell 14 was excavated, backfilled and verified in two parts; the cell was also evaluated as two Survey Units for the MARSSIM evaluation due to its large size.
- (5) In Cell 9, backfilling was completed before excavation was considered complete as it was necessary to backfill to perform subsurface soil sampling that was considered an excavation-related activity for this cell.
- (6) Th-232 Site cleanup level was not attained in Cell 9, subcell H21 and uranium in Cell 9, subcell E20.
- (7) Ni Site cleanup level was not attained in Cell 9, subcells E20, G20, and G21

Additional soil wastes generated included 64,050 lbs (3 Lift Liners™) associated with the cleaning of sheet pile, 82,460 lbs (4 Lift Liners™) removed from soils beneath the slab of the 100 Building, 511,600 lbs (26 Lift Liners™) of soil generated during the removal of the helical piles used during the excavation in the vicinity of the 100 Building, and 1,864,800 lbs (106 Lift Liners™) of soil generated during investigations subsequent to completion of Phase I soil remediation activities generated late in 2004 through mid-2005. The radioactive sources used in the on-Site gamma spectroscopy system weighed 36.37 lbs (1 Lift Liner™) and were shipped to Alaron, Wampum, PA, where they were encapsulated and then disposed at Chem-Nuclear Systems-Duratec, Barnwell, SC, in June 2006.

Once excavation was complete within each cell, gamma radiation walkover surveys were performed along with confirmation/verification soil sampling to confirm that radiological, VOC and Ni Site cleanup levels had been attained. Based on the Phase I soil remediation program STL analytical results, Site cleanup levels were attained except as follows:

- Residual uranium remains in the soil above Site cleanup levels in Cell 1 (subcell U05), Cell 9 (subcell E20), and Cell 13 (subcell J25);
- Residual Th-232 remains in the soils above the Site cleanup level in Cell 9 (subcell H21);
- Residual PCE remains in the soil above the Site cleanup level in Cell 4 (subcells V16 and W16); and
- Residual Ni remains in the soil above the Site cleanup level in Cell 9 (subcells E20, G20, and G21).

The residual contamination was located at or below the allowable excavation depth for the current project design. STL samples containing residual contamination identified during the Phase I remediation program (on or prior to September 23, 2004) that remain in place are listed in Table 4 below.¹

Table 4. Samples Exhibiting Constituents Above the Cleanup Levels

Cell	Subcell	Barcode Location	Boring Number	Sample Type	Depth (ft)	Sample ID No.	Th-232 (pCi/g)	
09	H21	09H21DL01	DL01	SP	31.3	16379	3.02	
Cell	Subcell	Barcode Location	Boring Number	Sample Type	Depth (ft)	Sample ID No.	U-234 (pCi/g)	U-238 (pCi/g)
01	U05	01U05D		VF	24.9	00434	54.4	56.5
09	E20	09E20B		VF	16.3	16890	53.1	52.3
13	J25	13J25A		VF	6.3	01378	71.6	7.2
Cell	Subcell	Barcode Location	Boring Number	Sample Type	Depth (ft)	Sample ID No.	PCE (mg/kg)	
04	V16	04V16B		VF	24.9	05323	9.8	
04	W16	04W16D		VF	24	05276	400	
Cell	Subcell	Barcode Location	Boring Number	Sample Type	Depth (ft)	Sample ID No.	Ni (mg/kg)	
09	E20	09E20DL17	DL17	DL	36	17475	754	
09	E20	09E20DL17	DL17	SP	26.5	17222	738	
09	G20	09G20DL04	DL04	SP	50.6	16591	688	
09	G20	09G20DL10	DL10	SP	52.9	17231	588	
09	G21	09G21DL08	DL08	SP	31	17224	1620 J	

Notes:

SP = Sample Point sample (bottom of boring)

VF = Verification sample

DL = Delineation sample

J = Estimated concentration

¹ On-Site sample analyses and STL sample analyses related to other Site investigations conducted subsequent to the Phase I soil remediation program including deeper investigations of Cells 3, 4, 8, 9, 12, and 14 are presented in the reports discussed in Section 10.4 of this report.

7.2 ANOMALIES

For Site purposes, the term anomaly refers to an unanticipated historic feature discovered during the remediation that is not part of a debris field. Examples of anomalies include historic leach pools (LPH) or historic dry wells, pipes of different sizes and materials, USTs, 55-gallon drum remnants or other artifacts that could possibly be conceived as part of the original facility's processing system (Appendix C, Photographs 36 and 37). These findings were photographed, sampled and surveyed in place as they were encountered. Where possible, samples were collected from both the material found inside the anomaly, as well as the surrounding soils (Appendix B, Table 2 provides within each *Cell Status Report* the description, location, and sample results for each anomaly). Each anomaly was assigned a unique identifier. If there was an uncommon discovery such as a UST or a cluster (3 or more) of drum remnants, NYSDEC was immediately notified. Except for a pipe located in Cell 11 as described below, anomalies were sized to fit within a Lift Liner™ or other acceptable container and shipped to the disposal facility.

During excavation, two previously unregistered USTs were identified: one UST was found in Cell 2 (Appendix C, Photograph 38) and one in Cell 10. The removal of these two USTs was reported in *Tank Report, Cell 2, 140 Cantiague Rock Road, Hicksville, New York* (URS 2004a) and *UST Report, Cell 10, 100 Cantiague Rock Road, Hicksville, New York* (URS 2004d) previously submitted to NYSDEC. In Cell 11 a small silver-colored metal tube filled with a powdery material was encountered (Appendix C, Photograph 39). The disposition of the metal tube is described in the March 18, 2004 report (GTEOSI 2004). For details of other anomalies found on a cell-by-cell basis including results of analyses, refer to Appendix B, *Cell Status Reports*. Figure 9 shows the locations of the anomalies encountered.

7.3 SCREENING AND SAMPLING PROTOCOLS

Field screening and sampling were performed during the remediation process to evaluate progress and to confirm that Site cleanup levels had been achieved. Debris and anomalies encountered during the excavation were inspected and tested to determine their disposition. Field instruments were calibrated/operational checked according to Section 6.2 of the Work Plan.

Sample collection protocols were followed independent of the type of soil sample collected (e.g., characterization, waste, confirmation/verification, etc.). These protocols were designed to maintain consistency and ensure that analytical results were representative of Site soil conditions. Throughout this sampling process, an LPS was used to identify the location (x, y, and z coordinates) of each sample, except for waste and field samples. If it was not possible to use the LPS system in an area, an alternative method such as GPS or manual tie back measurements were used. The sample locations and analytical results were used to generate maps and tables to assist in excavation efforts and reporting of results. These protocols are described in Appendix E of the Work Plan.

7.3.1 Sample Screening Process for Radioactivity

The ability to use field instruments to identify the presence of radioactivity supported the removal activities. Field instruments included sodium iodide (NaI) gamma detectors and

alpha/beta scintillation detectors. Radioactivity levels in soil samples were screened and characterized using the on-Site gamma spectroscopy system. The use of an on-Site gamma spectroscopy analysis confirmed that the field instruments provided an accurate evaluation of field conditions. The nuclide library was specific to the radionuclide constituents of concern at the Site and consistent with that used by STL.

7.3.2 Sample Screening Process for Volatile Organic Compounds and Nickel

During excavation activities, soils were screened for VOCs using a PID. Prior to sample collection, the soils were screened by inserting the probe approximately 6 inches bgs at several locations to take headspace readings. If the headspace analysis indicated concentrations of VOCs in soils that are above the Site cleanup level or if visual or olfactory evidence warranted, then excavation was continued.

Field screening for Ni, to facilitate remediation decision making, used a field portable XRF to analyze soil samples (see Section 7.6.2.1).

7.3.3 Sample Categories

The sample nomenclature, referred to as sample designators, is outlined in Table 5 below and discussed in the following subsections. Several sample classifications were developed to chronicle and identify samples collected. Samples were first identified by genre to distinguish a sample, waste bag, or trip blank. The sample categories identify the analysis to be performed (i.e., radiological, chemical, or Ni). Next, the sample type and media type (matrix) were identified. Each sample type has its own sampling protocol, QA/QC, and volume requirement.

Table 5. Explanation of Sample Designators

Genre	Sample	Waste	TB					
	Sample	Waste bag	Trip Blank					
Category	R	C	N	Z	M	S	T	D
	Radiological	Chemical	Ni	C and N	Misc.	SVOC	TCLP VOC	Max. Density
Type	CH	CF	VF	CV	WS	BG	BF	BS
	Characterization	Confirmation	Verification	Conf./Verif.	Waste	Backfill (off Site)	Backfill (on Site)	Backfill (on Site, removed and staged)
	HS	EX	SP	DL	KD	DR		
	Health & Safety	Extra	Sample Point	Delineation	Kd Drilling	Drainage		
Matrix	S	W	A	F	D	P	G	
	Soil	Water	Anomaly	Filters	Debris	Pipe	Sludge	
	U	M						
	UST	Drum						
Additional Sample Info	S1	S2	S3	DP	AG	BB	GA	
	On-Site Analysis	Off-Site Analysis	Archive	Duplicate	Aggregate	URS Blue Bell	GTE Attorneys	
	EC	NY State Department of Environmental Conservation						
	DH	NY State Department of Health						
	MS	Matrix Spike						
	SD	Matrix Spike Duplicate						
PF	Plaintiff							

Permanent labels were generated by the barcode system and were affixed to each sample container.

7.4 SAMPLE COLLECTION

Soil surfaces were routinely sampled to assess the progress of remediation, provide continuous documentation of radiological and chemical conditions, and develop the correlation between instrumentation response and actual concentration of target contaminants. When the slope and stability of the excavation were safe for the technician to enter, samples were collected directly from the excavation. When conditions did not allow entry into an excavation, sampling was conducted remotely with the aid of the excavator bucket.

Characterization (CH) samples were used to assess the progress of remediation. Initially, characterization screening and sampling began at ground level and were repeated at a minimum of 2-meter deep intervals until the completion of the excavation of that area. A five-pointed star alternating sampling pattern was established to provide good coverage of the cell. The sampling pattern was revised in June 2003 to include two samples from the interior subcells and three from corner subcells. The revised pattern provided improved cell coverage and operational efficiency.

When the field instruments indicated that remedial efforts had achieved the established Site cleanup levels, a systematic Confirmation (CF) and verification (VF) sampling program was implemented. A four (4) location pattern resembling a diamond and designated as the "ABCD Sampling Protocol" (Figure 9) was laid out in each subcell. Using the pattern as a guide, the locations for sampling were biased toward those areas where contaminants had previously been detected. The sample locations were then captured using the LPS (Cells 1, 2, and 13). However, starting with Cell 8, the sequence was reversed and the sampling points were laid out using the LPS prior to sample collection.

The CF samples were analyzed on Site, and the VF samples were analyzed by STL. The CF sample results were used in deciding that an excavation was ready for back-filling, while the STL VF results were used to determine whether the remediation efforts in a cell achieved Site cleanup levels. The VF samples were either collected in concurrence with or were splits of CF samples.

Additional samples were collected via the use of soil borings [hand augers, hydraulic auger, or hollow stem auger drill rig, (see Sections 7.4.1 and 10.4.1)] or trenches following excavation and backfill operations to determine the vertical and lateral extent of an area with residual contamination. Samples were collected in this manner due to the engineering limits of each excavation pit or other Site constraints. Radiological samples were collected in each boring at 1-foot intervals where practicable, and VOC and Ni samples were collected at the bottom of each boring and at additional depths if PID readings indicated elevated concentrations. The samples, collected throughout the boring, were labeled as delineation (DL) samples. The final depth of sampling in each boring or trench was designated as a sample point (SP) sample. During the remediation, SP samples could be used interchangeably with VF samples because both types of samples were analyzed by STL and the analytes were the same.

Waste (WS) samples were collected and analyzed for radiological constituents and VOCs for waste classification, shipping, and subsequent disposal. Lift Liners™ were filled with soil using an excavator. Approximately five excavator buckets filled one Lift Liner™. One VOC and one radiological sample per Lift Liner™ were collected when the Lift Liner™ reached approximately 50 percent of capacity. The WS samples [also referred to on Site as Waste Acceptance Criteria (WAC) samples] were collected out of the excavator bucket prior to soil placement in the Lift Liner™. Radiological and chemical technicians screened the soil in each bucket using field instruments. For chemical sample collection, a 5.5-inch plastic scoop was used to create a minimum of three 6-inch deep holes in the soils of the excavator bucket. The headspace reading of each hole was recorded (subtracting ambient air concentrations). A sample was collected from the area with the highest PID reading. For radiological sample collection, a bucket (2.5 or 5 gallons) of soil was collected and processed for on-Site and off-Site analyses.

After excavation, clean backfill from off-Site sources was required to fill the excavation pits. Samples of the off-Site source area backfill were designated as background (BG), backfill (BF), and borrow soil (BS) samples. Off-Site soils anticipated for use were stockpiled in dedicated locations, sampled, analyzed, and approved for use as backfill by NYSDEC prior to transfer to the Site. Screening and analysis were conducted to demonstrate that the off-Site source area soils were not impacted with contaminants and were suitable for backfilling. These samples were

designated as BG samples. Cell 1 (subcells U06 and U07) and Cell 2 (subcells U08, U09, U10, and U11) were re-excavated to address contaminated soils previously left in place. The backfill soil was stockpiled during the re-excavation, and samples of the temporarily staged material were collected to verify the soils had not been impacted through handling prior to its return to the excavation pit. Samples of the re-used backfill material were designated as BS samples.

Additional Sampling

Field (FS) samples were collected to help guide the excavation. These samples were used for screening purposes and were not barcoded. Debris (D), anomaly (A), and pipe (P) samples were collected to gather additional information about objects encountered during excavation and the potential historic use of these objects. Sample collection and analysis included analysis of the material, collection of wipes to provide an assessment of removable contamination, and/or analysis of the contents of the debris. Samples were collected inside and/or below the article, at breaks, cracks, or joints. Prior to sampling, as much of the object being investigated was exposed as possible.

Extra (EX), drainage (DR), health & safety (HS), and distribution coefficient (KD) samples were situation specific samples. EX samples were collected when sampling trenches, when soils were encountered with stain, sheen, elevated field readings, or when a sample collected did not fall under another heading. In addition, early during the project, samples from pipes, debris and other anomalies were given unique designators (e.g., A1-5/02, A2-5/07, A6-5/12, letter number-date). As the project evolved, providing a specific designator became more cumbersome; therefore, the EX designator was employed as a catch-all category for such samples. DR samples were collected when non-impacted material was excavated during installation of the interim drainage system to demonstrate the soils could be used on Site. The HS sample designator was used for carbon granules filter media collected from the air handling system, to demonstrate by analysis that there were no releases to the environment.

To provide information on the potential for contaminants to migrate, both vertically and horizontally within the subsurface, samples were collected and analyzed for soil distribution coefficient (K_d) for total uranium, total thorium and total Ni. The boring locations were based on collecting soils not impacted from historic Site manufacturing residuals. The data is being used to model the potential for future impacts from residual contaminants (URS, 2006; in preparation).

On occasion, samples were split with NYSDEC or other third parties for submittal to their independent laboratories. When samples were collected by NYSDEC, particularly during the cell verification process, duplicate samples were collected and customarily analyzed both on Site and off Site. Comparison results were within an acceptable range of each other.

During Phase I soil remediation, 20,201 radiological samples were collected, barcoded and analyzed (17,603 on Site and 2,598 off Site). There were 17,555 samples collected, barcoded and analyzed for VOCs and/or Ni (13,406 on Site and 4,149 off Site).

7.4.1 Augering

When additional investigation was warranted to verify whether contaminants remained beyond engineering limits or at depth in an adjacent cell, one of three different augering techniques were employed (hand-augering, hydraulic augering, or hollow stem augering with a drill rig). Borings were advanced until at least two successive samples showed contaminant concentrations below the Site cleanup levels or to a maximum target sample depth of 67 feet bgs to maintain at least a 5-foot interval above the water table in areas of impacted soils. The soils were classified in general accordance with USCS and boring logs are provided in Appendix E.

Soil samples collected by augering were screened in the field. Screening activities consisted of immediate recording of the PID readings followed by gamma count rate detector readings. Samples were collected for laboratory analysis of VOCs, Ni, and radiological analysis. Certain samples were also collected and analyzed for beryllium (Be).

Hand Augering

Hand augering was performed to collect samples when the excavation reached a design depth below which further investigation was required and locations were not accessible to use other augering methods.

The hand auger consists of a high carbon steel bit welded to a stainless steel cylinder. The cylinder was attached to an extension rod and a cross handle. The auger was turned clockwise to advance and fill the cylinder. The auger was then carefully removed from the borehole so the soils could be collected from the cylinder. The soils were screened for VOCs and radionuclides, and then were collected and analyzed. This process was repeated until at least two successive samples showed contaminant concentrations below the Site cleanup levels or to a maximum target sample depth of 67 feet bgs (this depth takes into account the starting depth of the excavation surface). Where required, a 4-inch polyvinyl chloride (PVC) casing was installed in the open boring to prevent sloughing and maintain the integrity of the hole.

The hand auger was decontaminated between sampling locations. Decontamination of the augers was performed by washing the cylinder at the point of usage. The liquids were collected and stored in a Baker Tank, analyzed and then properly disposed. Soils and sediment from the decontamination process were disposed in Lift Liners™ along with the remediated soils.

Hydraulic Augering

Investigational augering was conducted using an excavator-mounted hydraulic auger (Cells 12 and 14). The 5-foot long, 12-inch diameter solid auger was drilled into the soil. The soil cuttings were screened for VOCs and radionuclides. Soil samples were collected from the auger flights. At a minimum, three samples were collected from each boring. The borings were advanced until at least two successive samples showed concentrations below the Site cleanup levels or to a maximum sample depth of 30 feet bgs. Where required to prevent sloughing and maintain the integrity of the hole, a 13-inch steel casing was installed and measured for depth reference.

The auger was decontaminated between sampling locations by scraping and wiping the auger clean.

Hollow Stem Augering with a Drill Rig

The third augering method was a truck-mounted hollow stem auger drill rig with 3-inch diameter split-spoon sampling capabilities. The center of the 4¼-inch inside diameter (ID) auger is hollow with helical spirals on the outside to move material from the subsurface to the surface. A bit at the bottom of the auger stem cuts into the subsurface material. Split-spoon samples were collected continuously from the surface to a maximum depth of the boring. The soils were screened for VOCs and radionuclides. Soil samples were collected and analyzed as noted above. The borings were advanced until at least two successive samples exhibited concentrations below the Site cleanup levels or to a maximum target depth of 64 feet bgs.

The split-spoon samplers were decontaminated between sampling intervals by washing and rinsing. The hollow stem augers were decontaminated between boring locations, pressure washed in containment, and the liquids were stored in a Baker Tank, analyzed and then properly disposed.

7.5 SAMPLE AND WASTE TRACKING

7.5.1 Barcode System

A barcode tracking system was designed for this project to electronically generate a unique barcode and barcode label for samples and waste containers. This system is comprised of two sub-systems, a barcode generation system and a tracking system. The barcode generation system is a wireless local area network, which consists of a main Access[®] database and a receiving and driving application installed on a personal computer (PC) with Windows2000[®] operating system. The computer was used to receive barcode data from various hand-held pocket PCs/scanners operated by the barcode technicians, and also to retrieve data from the database needed to drive portable barcode label printers.

Sample Tracking

Sample barcodes were imprinted with the date, time, Site identifier, analysis required, preservative (if applicable), and technician identification. The tracking system includes tables for tracking samples going through the sample preparation area, on-Site analysis, off-Site analysis, and samples stored in the sample archive area. The two sub-systems are linked via the main barcode database.

To avoid loss of productivity due to a system failure, a mirroring barcode generation system (backup) was installed on a separate computer. In the event of a main system failure, the field operators can log into the mirroring system and continue to create barcodes and print labels that contain barcode label information.

Once a container (sample, bucket, Lift Liner[™], drum, Intermodal, or Sea Land Container) was barcoded, it was tracked to ensure that it was received in the gamma spectroscopy area, SEI, or STL for analysis or the transportation company. Upon receiving the samples, the barcodes are scanned. This process transferred the sample IDs into an Excel[®] spreadsheet imprinted with date and time. The spreadsheet was loaded into the tracking database.

Waste Tracking

The filled waste containers (Lift Liner™, drum, Intermodal, or Sea Land container) were surveyed, assigned a number, marked, weighed, barcoded (a smaller waste bag barcode label and a weight barcode label were generated and attached to the waste tracking form), and assigned a storage location. The storage location number, date, and time were also entered on the container survey sheet. The scale ticket was then printed and attached to the container survey sheet.

Once the container survey sheet was complete including a radiological on-contact reading, 1-meter dose rates, and bin number in the storage area, the data was then entered on an Excel® spreadsheet for shipping. Then the container survey sheet was given to document control personnel to be filed for record keeping and the scale ticket was given to the shipping and waste container tracking personnel to be entered on the shipping database. This method identified the containers generated within each enclosure, daily Lift Liner™ sheets, the gondola loading spreadsheets, and the main database. Finally, daily inventory sheets were maintained to track the waste and its location.

Site personnel tracked the waste from the on-Site staging area until it departed the rail spur in Hicksville, New York. MHF-LS, through The New York and Atlantic Railway (NY&ARW), tracked the waste from the rail yard to Envirocare.

7.5.2 Chain of Custody

The custody of samples for both on-Site and off-Site analyses was documented on chain-of-custody forms. At the time of sampling, a Site-specific form was initiated that provided the type of sample, the sampler's initials, location of sample (cell and subcell), depth of sample, analytes to be tested, date and time of sample collection, and PID readings. The form was placed in the cooler with the samples, packed on ice, and were delivered to the technicians in the barcode area. Once in the barcode area, the technicians generated and applied the barcodes to the sample containers and proceeded to generate the chain-of-custody forms. The chain-of-custody records include the full sample number, matrix, number of containers, analyses required, preservative (if applicable), name of barcode technician, date and time of sample acquisition, and special characteristics/instructions. Sample tracking for the on-Site gamma spectroscopy system used both the chain-of-custody forms and the instrument run logs. When the samples were shipped off Site to STL, the chain-of-custody forms accompanied the sample shipment. In addition, when the samples were returned to the Site by STL, the custody of the samples was documented on STL Sample Disposal Reports chain-of-custody forms.

7.6 SAMPLE PREPARATION AND ANALYSIS

Samples were prepared in accordance with the Site procedures established in Appendix E of the Work Plan. These procedures provide the method for processing representative, composite and grab soil samples. Storage and archiving procedures were also addressed in Site procedures.

Sample analysis was performed to guide excavation, characterize soils for waste classification, and verify that Site cleanup levels were attained. The samples were analyzed on Site and

designated samples were also sent off Site for analysis. Analytes included radiological components, VOCs, and metals. The following discussion provides the details of these analyses.

7.6.1 Radiological Constituents

Radiological constituents of concern included U-238, U-235, U-234, and Th-232.

7.6.1.1 On-Site Analysis (Gamma Spectroscopy)

On-Site gamma spectroscopy analyses were performed to guide excavation and waste characterization activities. The on-Site gamma spectroscopy system used was an ORTEC® system that used a high purity germanium detector and was designed to identify the radionuclides previously detected on Site. The instrument's nuclide library for radionuclide identification was specific to the radionuclide constituents of concern at the Site, and consistent with that used by STL. The system included a shielded counting chamber that used a geometry that minimized counting time and provided a high degree of precision (repeatability). The QA/QC functions of energy calibration accuracy, calibration stability, and duplicate analysis were performed to ensure reliability and precision of the analyses.

7.6.1.2 Off-Site Analysis (Severn Trent Laboratories, Inc.)

Samples analyzed at STL were initially analyzed using gamma spectroscopy via Environmental Measurements Laboratory Procedures, United State Department of Energy (USDOE) Health and Safety Laboratory Method 300 4.5.2.3 (HASL 300), alpha spectroscopy for isotopic thorium using either the National Academy of Sciences (NAS) Method TH-NAS-NS-3004 or the USDOE RP-725 Group Actinide Screening Using Extraction Chromatography (Eichrom) Method, and alpha spectroscopy for isotopic uranium using either the U-NAS-NS-3050 or the USDOE RP-725 Group Actinide Screening Using Extraction Chromatography (Eichrom) Method. Off-Site gamma spectroscopy analysis was discontinued by STL following NYSDEC approval of the Work Plan amendment dated August 2, 2004, based on an acceptable correlation between on-Site gamma spectroscopy analysis and STL alpha spectroscopy analysis.

7.6.2 Volatile Organic Compounds and Metal Constituents

VOC and metals of concern included PCE, TCE, and Ni.

7.6.2.1 On-Site Analysis (Stone Environmental, Inc.)

SEI used solid phase microextraction and capillary gas chromatography to analyze soil samples for specified VOCs [vinyl chloride, *cis*-1,2-DCE, *trans*-1,2-dichloroethene, TCE, PCE, benzene, toluene, ethylbenzene, *m* & *p* xylene, and *o*-xylene (the three isomers reported as total xylenes)] and total petroleum hydrocarbons (TPH) (gasoline, kerosene, No. 2 fuel oil, and diesel). Standard QC procedures were followed and listed in the SEI standard operating procedure (SOP) for on-Site VOC analysis (Attachment 1 to Appendix E of the Work Plan).

Field screening capabilities for metals were incorporated into the Phase I soil remediation program to facilitate remediation decision making. SEI used a field portable XRF instrument to analyze soil samples for Ni. Reporting limits were generally 100 mg/kg. The details of the procedure including quality control measures are presented in the SEI-10.16.0, *Standard Operating Procedure, Determination of Selected Elements in Soil and Sediment Samples Using Field Portable X-Ray Fluorescence Spectrum Analyzers, SW-846 Method 6200*, September 2004.

7.6.2.2 Off-Site Analysis (Severn Trent Laboratories, Inc.)

Soil samples that were sent off Site to STL were analyzed for VOCs and Ni using USEPA Methods 8260B and 6010B, respectively. Certain samples were also analyzed for pH, percent moisture, Toxicity Characteristic Leaching Procedure (TCLP) VOCs, PCBs, SVOCs, pesticides, herbicides, Target Analyte List (TAL) metals, Be, and TPH.

7.7 DATA MANAGEMENT AND VALIDATION

The management of laboratory data involved the handling of information associated with sample collection, analytical reporting, data review, and final data presentation and reporting. The objective of data management and validation was to create a reliable database for remediation decision making and documenting that remedial efforts resulted in achieving Site cleanup levels for the Site soils.

7.7.1 Data Management

The goal of laboratory data management is to produce a series of electronic files containing validated analytical results for samples collected during the project. The data management specifications describe the data processing standards, and electronic data pre-loading, loading, and reporting practices. These specifications minimize errors in the compilation of data and provide for an accurate and reliable database. The data management was divided into on- and off-Site components to accommodate the varying procedures of each laboratory and the differing locations of data management.

7.7.2 Data Validation

Data validation was performed on the data packages received from SEI, on-Site gamma spectroscopy analysis, and STL analysis. The following guidelines and professional judgment were used for data validation.

USEPA, 1999. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

USEPA, 1999. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 1999.

USEPA, 2001. *Region II Standard Operating Procedure for Organic Data Review*, SOP HW-6, rev.12, March 2001.

URS, et. al., 2003. *Comprehensive Soil Remediation Program Work Plan, Former Sylvania Electric Products Facility, Hicksville, New York*, January 18, 2002 (Revision 5: June 2003).

USDOE, 1995. *Guidance for Radiochemical Data Validation Draft RD4*, October 4, 1995.

New York State Department of Environmental Conservation, 2000. *Analytical Services Protocol Guidance documents including Exhibits A, B, C, D, E, F, G, H, and I*, June 2000.

Science Applications International Corporation (SAIC), 2000. *Laboratory Data Validation Guidelines for Evaluating Radionuclide Analysis*, (143-ARCS-93.08), Revision 06, June 2000.

USEPA, 1998. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, (SW846)*, Final Update III A, April 1998.

Hicksville Site, 2004. *Standard Operating Procedure for Gamma Spectroscopy Operation and Analysis, SOP-RAD-009*, Revision 1, February 4, 2004.

Stone Environmental, Inc. 2004. *Standard Operating Procedure for Determination of Aromatic and Chlorinated Volatile Organics and Lightweight Petroleum Hydrocarbons (C4–C16) Using Solid Phase Micro-extraction and A Gas Chromatograph in Soil and Water Samples, SEI-10.1.2*, Revision 2, March, 31, 2004.

The analytical data packages and the data validation notes are archived. The validation report is included as Appendix D.

7.8 SAMPLE MANAGEMENT AND ARCHIVING

The samples were managed using a multi-step process. Sample tracking was accomplished by recording sample numbers in hard copy notebooks organized by cell number, excavation enclosure number, and date of sample acquisition. Electronic files of the sample analytical results (see Section 7.7) were entered into the main database. The data was queried and used to generate maps to track the progress of remediation and to document the status following remediation.

The majority of Site samples that were analyzed off Site were returned to the Site using STL Sample Disposal Reports chain-of-custody procedures. Site soil samples from the Phase I remediation program and prior Site investigations were archived in secure Sea Land containers in the 140 Building. The Site samples were shipped to EnergySolutions (formerly known as Envirocare) for disposal in November and December 2006. The samples were archived by type of sample (matrix), date of collection, and physical location of collection.

7.9 BACKFILL

Over 50,000 cubic yards of soil were used to backfill the excavated cells. There were 17 potential backfill source areas that were sampled and 8 were selected to supply the Site backfill. Specific backfill source areas are provided in the Cell Status Reports (Appendix B). Backfill stockpiles were created at Posillico Brothers Asphalt in Farmingdale, New York, and at the Site to ensure adequate soil availability when needed and, thereby, minimize impacts to the project excavation schedule.

Soils from the potential backfill source areas were characterized for their radiological and chemical constituents. At each potential source area, a walkover survey was conducted for radiological and chemical constituents. Radiological field readings were taken with a Ludlum 2350-1/44-20, 3-inch NaI gamma survey instrument. VOCs were measured using a MiniRAE 2000[®] PID. The location of the source area was documented using the GPS. The samples were collected for on-Site analysis of VOCs and radionuclides and for off-Site analysis for pH, percent moisture, VOCs, SVOCs, TAL metals, PCBs, and radionuclides. Results of these analyses were compared to the NYSDEC TAGM values. Analytical data for potential backfill sources were submitted in separate reports to NYSDEC for approval. The backfill source reports are listed in Section 11.0, References (GTEOSI 2003d through 2003g; URS 2003e, 2004b and 2004c). Backfill used at the Site was approved by NYSDEC.

After receiving authorization from NYSDEC to backfill a cell, the backfill soils were spread on the Site by bulldozer in 1-foot lifts and compacted with a Cat[®] CP-563E vibratory roller. The roller specifications met the New York State Department of Transportation (NYSDOT) guidelines for a Compactive Force Rating minimum of 90 and a maximum of 153. Each lift received a vibratory compaction treatment of six passes. According to NYSDOT specifications, this treatment regimen and the equipment used, a maximum lift thickness of 2.25 feet yields a compaction comparable to 90% of the dry density of the soils.

7.10 CELL STATUS REPORTS

The Cell Status Reports were completed using off-Site laboratory analyses, as required by NYSDEC, to verify that each cell attained Site cleanup levels. These reports include:

1. *Introduction* - applicable subcells within the cell, a description of the cell activities including key dates (cell excavation start and finish, backfill authorization, backfill start and finish), applicable backfill sources and the associated analytical report(s), and regulatory approval documents;
2. *Depths of Excavation* - range of final excavation depths, net weight of waste material (soil and debris) removed from the cell, and the quantity of Lift Liners[™];
3. *Anomalies* - information on anomalies [referencing associated table(s) and figure(s)];
4. *Gamma Radiation Walkover* - cell-specific information such as dataset quantity used to illustrate the walkover data and its statistical evaluation [Cumulative Frequency Distribution (CFD)] plot;
5. *Verification Sampling* - details the sampling protocol (as well as deviations), evaluation of the analytical data against the applicable guidance (the MARSSIM for radiological

- analyses) and Site cleanup levels, VF floor and wall samples [referencing associated table(s) and figure(s)], and off-Site analytical laboratory procedures;
6. *Focused Subsurface Soil Sampling* – when required additional subsurface soil sampling performed to delineate the volume and type of contaminants identified or suspected beneath the surface following excavation, analyte(s) of consideration, subcells involved, boring locations, and the quantity of samples collected;
 7. *Systematic Subsurface Soil Sampling* - when required reasons and methods for the systematic subsurface soil sampling protocol including associated sample data table and figure(s);
 8. *Results* - off-Site analytical results of the VF samples for the analytes as compared to the Site cleanup levels [referencing associated table(s) and figure(s)], and whether or not the survey unit (SU) passes [the MARSSIM evaluation of the SU radiological data using the Computerization Of the MARSSIM for Planning and Assessing Site Surveys (*COMPASS Software*)];
 9. *Conclusion* – attainment or non-attainment of applicable Site cleanup levels; and
 10. *Appendices* –regulatory approval documentation, the MARSSIM evaluation.

These reports are included in Appendix B. For a description of the activities referenced in the *Cell Status Reports*, refer to the sections of this report text as referenced below:

- Excavation Plan is described in Section 6.2;
- Anomalies are described in Section 7.2;
- Gamma Radiation Walkover Surveys are described in Sections 8.2.2 and 8.2.3;
- Sample Collection is described in Section 7.4; and
- Augering methods are described in Section 7.4.1.

8.0 MARSSIM EVALUATION

The guidance for designing a radiological survey to evaluate potential radioactivity dose over a given area is MARSSIM (NRC 2000). The basis of the survey for radionuclides was an integrated design, combining:

- Measurements and sampling at systematic positions on a regular, recurring pattern in each cell to determine the average concentration of contaminant distributions; and
- A surface scanning survey to identify localized areas of elevated radioactivity between the sampling points.

The evaluation of the achievement of radioactivity remediation goals using MARSSIM statistical methods was performed twice for each cell. CF samples, analyzed on Site and used to demonstrate that the Site cleanup levels had been met, were a conditional indication that sufficient excavation had occurred. These results were verified by VF samples and analytical results performed by an independent, off-Site laboratory, STL.

8.1 PHASE I STATUS SURVEY PROCESS

The demonstration of the attainment of Site cleanup levels in each excavation cell is an iterative, process using both field instruments and soils samples. The Phase I status survey process at the Site is based on the MARSSIM final status survey protocol and is explained below.

The NRC has developed *COMPASS Software* to implement the MARSSIM statistical guidance and to provide informative reports in a consistent format for review. The CF and VF soil sample analytical results were entered into the *COMPASS Software* to demonstrate that statistically Site cleanup levels have been attained. A summary of the results of the surveys of the 14 Cells is provided in Table 5, Section 10.1 of this report. The VF soil sample results and the assessment of the status for each cell using the *COMPASS Software* are provided in the *individual Cell Status Reports* (Appendix B).

When excavation support surveys, biased toward those areas that had previously exhibited contaminants, indicated that impacted soils were no longer present at the exposed surface, excavation in the cell was stopped. A walkover survey for gamma radiation was performed on the exposed excavation surface, the data locations were mapped, and a CFD plot of the data was generated.

Following the walkover survey, a systematic sampling and analysis program was implemented. Site personnel established a grid on the exposed excavation surface and collected four samples from each subcell using the Site ABCD Soil Sampling Protocol (Figure 9). The analytical results of the radiological CF samples from the on-Site analysis were assessed using the MARSSIM statistical methods and the *COMPASS Software* to demonstrate that radiological conditions met the Site cleanup levels. Each of the CF sample results from the cell was compared to the Site cleanup level for each of the three radiological contaminants, alone and in combination using the sum of ratios (SOR) method.

NYSDEC was notified of the CF sample results and was provided a copy of the walkover plot and CFD graph. NYSDEC personnel had an opportunity to sample and survey the exposed excavation surface, providing an independent assessment of the cell status.

The Site prepared a formal report with the statistical analysis of the CF sample results and the gamma radiation walkover survey results, and requested authorization from NYSDEC to backfill the excavated cell (the “*Attainment of Radiological and Chemical Cleanup Levels Report*”). After obtaining approval from NYSDEC, the excavated cell was backfilled with soil from an approved off-Site source.

The VF sample results from STL were also assessed using the MARSSIM statistical methods and the *COMPASS Software* to demonstrate that radiological conditions met the Site cleanup levels. The statistical analysis of the VF sample results, an interpretation of the gamma radiation walkover survey plot, the CFD graph, and the *COMPASS Software* assessment are included in a formal report for each cell in Cell Status Reports (Appendix B).

8.2 SURFACE SCANNING

Surface gamma radiation scans, also referred to during project operation and reporting as “gamma radiation walkover surveys”, were performed following the completion of excavation in each cell. Surface scan data is assessed using two independent data review methods: posting plot and frequency display. The two graphical methods provide separate interpretations of the data set to identify if and where localized areas of elevated residual radioactivity remain.

Due to the inherent nature of the distribution of the impacted soils in a given cell, the subsequent excavation activities often resulted in the excavation bottom being uneven. The inability to safely perform surface gamma radiation scans occasionally resulted in areas where no surface gamma radiation data was collected (Figure 3 in Appendix B Post-Excavation Gamma Radiation Walkover Survey Results in the *Cell Status Reports*). With the exception of Cell 14, each excavation cell was a Class 1 SU as defined by the MARSSIM. Cell 14 was split into two SUs due to its size. Although the MARSSIM recommends 100 percent scan coverage for Class 1 SUs, other available methods (e.g., static survey with the probe extended from a safe standing location or gamma spectroscopy analyses from FS collected from that area) can and were used to demonstrate that the soils in question met radiological Site cleanup levels.

8.2.1 Survey Instrumentation

Various types of survey instrumentation were used in the field including radiation measurement (RM) instrumentation (a 3-inch NaI calibrated to a data logger), the LPS, and the combined RM/LPS. The uses of the instruments in the field program are described below.

8.2.2 Walkover Survey

Using the 3-inch NaI calibrated to a data logger, the operator traversed the cell in parallel passes, automatically collecting time, date, 3-D position, and gamma count rate data for each data point at specified intervals (Appendix C, Photograph 41). Based on this interval and radius of

influence, the operator maintains a pace of approximately 1 meter per second (mps), and a spacing of approximately 1 to 2 meters between adjacent passes. During the course of data collection, the operator can observe progress on the hand-held terminal, which gives a delayed visual display on a map of the survey area. Once data was collected in an area, the laser towers were relocated. The setup and survey steps were repeated until data was collected from the excavated area.

8.2.3 Survey Interpretation

Following data collection, the data was downloaded and imported into a spreadsheet for statistical analysis using a CFD and to develop a posting plot (Figures 3 and 4, respectively, in each *Cell Status Report* provided in Appendix B). The use of two separate interpretations to review the data adds to the confidence that areas of residual radioactivity were not overlooked.

8.2.3.1 Cumulative Frequency Distribution Analysis of Walkover Survey Data

To evaluate the walkover data, the natural log of the gamma count rate (counts per minute (cpm) values [$\ln(\text{cpm})$]) were plotted on the x-axis and their corresponding cumulative percentile ranking (%) on the y-axis. Identical $\ln(\text{cpm})$ values received the same percentile ranking. This method was useful for distinguishing multiple data populations (such as response to ambient background and to elevated or contaminated areas) within large data sets (hundreds or thousands of data points) such as those generated using the RM/LPS. The data transformation from count rate to natural logarithm of the count rate enhances the difference and makes outlier populations more easily recognized.

Visual review of the CFD graph allowed the distinction between the resident (background) population, which appeared as a continuous line of data with a relatively constant slope, and nonresident data (readings due to residual contamination) population present, which would show up at the top of the plot, connected to the background population at a “knee,” (a horizontal bend in the plot having a noticeably steeper slope to the extreme).

8.2.3.2 Posting Plot Analysis of Walkover Survey Data

A posting plot of the data is used to provide a pictorial representation of the data in which data values and locations are entered on a map of the cell. Data points on the cell map are color-coded based on the data populations identified in the CFD. This aids in the identification of data clusters greater than background that may indicate residual contamination. The plot has the potential to reveal heterogeneities in the data representing possible areas of elevated residual radioactivity that are not evident in the tabulated data.

8.3 SAMPLING COMPONENT

The MARSSIM provides a logical process for using sample results to demonstrate that the Site cleanup levels are attained in the remediated areas. The basis for the process rests on the contamination potential of the area (area classification), the statistical test used to evaluate the

results, and a sufficient number of samples to provide statistical support to the remediation decision.

8.3.1 Area Classification

An SU is the MARSSIM term used to define a physical area on a remediation site for which a separate decision will be made as to whether or not that area exceeds the Site cleanup levels. With the exception of Cell 14, each of the remaining 13 cells comprised individual SU whose sample results were used independently to support the decision for that cell. Due to its total area, Cell 14 was considered to be two SUs for the MARSSIM evaluation purposes. The MARSSIM recommends a maximum area for Class 1 SUs of 2,000 m². The total area of Cell 14 is 2,901 m².

8.3.2 Statistical Test Selection

Sample results at the Site were assessed using the Sign Test, which is a statistical method recommended by the MARSSIM for contaminants that are not normally present in the site background soil. While uranium and thorium are naturally occurring radioactive elements in native soils, treating them as contaminants not normally present at the Site is a more stringent test to demonstrate that the Site cleanup level has been attained.

8.3.3 Number of Data Points and Grid Spacing

The MARSSIM provides a protocol for use in determining the minimum number of samples for an SU in order to have a strong statistical basis for assessing the results. Depending on the cell, between 13 and 22 samples per SU would be statistically sufficient.

With 14 cells (15 SUs) of varying shape and size at the Site, a uniform number of samples per SU would have created 15 different grid orientations, sizes and spacing between nodes. To preclude this level of complexity in tracking location and describing position on the Site, a uniform grid was established (see Section 6.2.1.2). Using this grid system to define the location of subcells and collecting four samples per subcell provided approximately 48 samples per SU, which are more samples than the minimum requires for statistical sufficiency. Each of the four samples was homogenized and split into duplicate portions. One portion of each of the four samples was submitted for on-Site radiological analysis by gamma spectroscopy (CF samples); and one portion of each of the four samples was sent to STL for independent radiological analysis by alpha spectroscopy (VF samples).

8.3.4 Data Assessment and Interpretation

The *COMPASS Software* was used to assess the sample analytical results to evaluate attainment of Site cleanup levels. In the program, each sample result from the SU is compared to the Site cleanup level for each of the radiological contaminants, in combination with the SOR method. The program draws a conclusion on PASS/FAIL by testing various statistics of the data distribution. A printed report is produced by the program to document the analysis, interpretation and conclusion.

The data from each of the 14 cells (15 SUs) was evaluated independently to arrive at 15 separate conclusions on the respective portions of the Site. The *COMPASS Software/MARSSIM* statistical testing of remediation success is actually performed twice for each SU,

- initially using the CF samples with the gamma spectroscopy results from the on-Site analysis (reported to NYSDEC in the individual *Attainment of Radiological and Chemical Cleanup Levels* Reports), and
- subsequently using the VF samples with the alpha spectroscopy results from STL (reported in the Cell Status Reports).

The results of the data assessment and conclusion are discussed in Section 10. The Cell Status Reports, which contain a discussion of the Phase I survey results using STL analysis, are included in Appendix B of this report. The MARSSIM analysis indicates that excavation of the 14 cells met its objective (see Section 3.0).

8.4 CONSERVATISM OF THE STATUS SURVEY DESIGN

The design of the Phase I status survey is inherently conservative providing greater assurance that the decision to cease excavation was appropriate. The conservative elements of the Phase I status survey included:

- The 14 cells were classified as 15 Class 1 SUs. The size of each SU is smaller than the MARSSIM recommended area limit for Class 1 SUs (2,000 m²). The resulting sample density was greater than the minimum indicated by the MARSSIM protocol.
- The use of the Sign Test did not account for the level of natural background uranium and thorium present on the Site.
- A larger number of samples provided a greater certainty to the statistical test.
- Performing statistical testing of samples analyzed by an independent laboratory using analytical techniques different from the on-Site analysis provided independent confirmation of Site cleanup levels attainment.
- Walkover survey data was interpreted both statistically and graphically.
- NYSDEC performed independent surface scanning walkover surveys and separate sampling and analysis.

9.0 SHIPPING AND DISPOSAL

The Work Plan provided the approach to remediation and waste disposition. As described above in Section 7.4, "Sampling Collection", excavated soil and debris were inspected, assessed, characterized and sampled (Appendix C, Photograph 42), as appropriate, and placed in Lift Liners™ for staging and transport to Envirocare for disposal.

9.1 RADIOLOGICAL SURVEYS

Surveys of the Lift Liners™ and gondolas were conducted to document compliance with USDOT requirements prior to transport (Appendix C, Photograph 43). Each Lift Liner™ was prepared for shipment, so that under conditions normally incident to transportation, the radiation level did not exceed 200 millirems per hour (mrem/hr) on the external surface of the package, and the transport index did not exceed 10. In addition, radiological surveys were performed at the rail spur to verify that contamination did not occur at the rail spur (Section 9.1.3).

9.1.1 Lift Liners™

Each Lift Liner™ has a capacity of approximately 6 to 8 cubic yards and holds up to 24,000 lbs. When full, each Lift Liner™ was closed, secured, and then transported by forklift to an on-site staging area (Appendix C, Photographs 44 and 45) where it was assessed for radioactivity in accordance with USDOT shipping criteria. The Lift Liners™ were placed on flat-bed trucks for transportation to the rail spur where they were placed in polypropylene-lined gondolas for shipment to Envirocare for disposal. The Lift Liners™ satisfy the USDOT criteria as Industrial Packaging – Category 2 (IP-2). Transportation was performed in accordance with USDOT shipping regulations contained in 49 CFR.

9.1.2 Intermodals

Polypropylene-lined Intermodals were used as needed to transport pieces of concrete or other debris too large to place into Lift Liners™. Intermodals were assessed for radioactivity and barcoded in the same fashion as the Lift Liners™. The Intermodals met the criteria for IP-2 packages.

9.1.3 Sea Land Containers

A Sea Land container was used to transport a storage tank. The Sea Land container was assessed for radioactivity and barcoded in the same fashion as the Lift Liners™. The Sea Land container met the criteria for IP-2 packages.

9.1.4 Rail Spur

Radiological surveys were performed on gondolas prior to use and after loading. Loading operations were monitored on a continuous basis by visual observation and qualitative radiological surveys to verify waste packages were not breached. In addition, a comprehensive

gamma radiation walkover survey was performed at the rail spur prior to its initial use and after shipments were completed. These walkover survey results indicate that the radiation levels measured after shipments were completed were within the same background range as the levels measured prior to use by the Site (Section 10.3).

9.2 WASTE CATEGORIES

Both solid and liquid wastes were generated at the Site during the soil remediation work. The solid wastes were classified as NORM, LLRW, SNM, mixed waste, or non-hazardous, non-radioactive waste. Liquid wastes were classified as either hazardous or non-hazardous. Descriptions of each of these categories as well as the applicable waste stream are provided below. Asbestos wastes are described in Section 6.2.1.1.

9.2.1 Solid Wastes

Solid waste included debris, soil, or anomalies encountered during excavation that had less than one percent free liquids. Solid wastes were placed in Lift Liners™, Intermodals, or Sea Land containers for off-Site disposal at Envirocare.

9.2.1.1 Radioactive Waste

The initial Site investigations revealed uranium, thorium and their natural decay products in the soils at concentrations above Site cleanup levels. Although above Site cleanup levels, the projected volume of soil to be remediated (including clean and impacted soils) would result in wastes typically less than 0.05 percent uranium or thorium by weight, the threshold for uranium and thorium to be regulated by the NRC as “source material” under the Atomic Energy Act (AEA 1954).

In May 2004, NYSDEC advised that material transported from the Site (excluding mixed waste) should be classified as LLRW. For the purpose of disposal, Envirocare confirmed that the classification of NORM was appropriate for material with concentrations below 0.05 percent uranium and thorium and natural U-235 ratio (not regulated by NRC). For other soils (greater than 0.05 percent and/or enriched) the classification of LLRW was appropriate. As a result, two waste profiles were used for radioactive material (non-mixed waste) sent to Envirocare for disposal: NORM for soils with a natural abundance of U-235 [Radioactive Waste Profile Record (RWPR) Number 0840-01] and SNM for soils enriched in U-235 (RWPR Number 0840-04).

9.2.1.2 Spent Carbon

Carbon canisters were used in the on-Site air handling system. Prior to replacement, the carbon units were scanned for radionuclides and VOCs. Composite samples were collected and analyzed for radionuclides, TCLP VOCs, TCLP SVOCs, TCLP metals, TCLP pesticides, TCLP herbicides and general chemistry parameters (pH, flashpoint, percent moisture, reactive cyanide, and reactive sulfide). The radiological testing was performed on Site and the remaining analysis was performed by STL. Following receipt and evaluation of the sample results, a non-hazardous, non-radioactive profile was completed and arrangements were made for disposal.

Recovery Environmental Services, Inc. of Montague, New Jersey serviced the carbon canisters. A vacuum truck was used to extract the carbon from the canisters and place into box containers. Aucter Industrial Vac Service, Inc. was used to transport the boxes of carbon via truck to Vineland, New Jersey. Non-hazardous waste manifests were generated for shipping and disposal purposes. The carbon was disposed of by Casie Ecology Oil Salvage, Inc. (Casie-Protank) in Vineland, New Jersey.

9.2.1.3 Mixed Waste

Mixed waste contains both a hazardous component as defined in 40 CFR Part 261 and radioactive component as defined by 42 U.S.C. Section 201 et seq. (AEA 1954). A hazardous waste is either a listed waste as described in the Resource Conservation and Recovery Act (RCRA) Subpart D and/or a characteristic waste as described in Subpart C. LLRW contains source, special nuclear, or byproduct material subject to the AEA (1954).

Some radiologically impacted soils from the Site were also impacted with VOCs and Ni. During remediation, soils were sampled and analyzed on Site to estimate the total concentration of the constituents of concern. In addition to guiding excavation, the analytical results from these samples were used to characterize the soils for transportation and disposal. The concentration of each constituent as determined by the on-Site analytical service, was divided by 20 to estimate the maximum leachable concentration (Section 1.2 of the TCLP Method) for comparison to the limits set forth in RCRA Subpart C. If the total constituent concentration was more than 20 times the characteristic limit, a sample was flagged for further evaluation. Samples with a range of concentrations near or above the characteristic limit were provided to STL to determine the leachable concentration using the TCLP described in USEPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*.

Using the rules as set forth in 40 CFR 261 and the above guidance, approximately 1,742,786 lbs (871 tons) of mixed waste were generated in 2003 and 511,930 lbs (256 tons) were generated in 2004. Of this, 2,254,716 lbs of excavated soils were characteristically hazardous waste for PCE and were assigned the USEPA RCRA code D039. Further, 3,820 lbs of waste was classified as corrosive hazardous waste and were classified as USEPA RCRA Code D002, as described in 40 CFR 261.22

Mixed wastes were generated under USEPA Identification Number NYD002036515. In compliance with applicable USDOT regulations, these wastes were transported to Envirocare, treated by Envirocare under a RCRA Part B permit and have been disposed of in Envirocare's mixed waste landfill. The D039 waste was treated using chemical oxidation and the D002 waste was treated using neutralization. Annual Hazardous Waste Reports for 2003 and 2004 were filed with NYSDEC.

9.2.2 Liquid Waste

Liquid waste includes non-hazardous wastewater, methanol laboratory waste, and caustic liquid. A discussion of the handling and disposal of liquid waste is presented below.

9.2.2.1 Baker Tank Non-Hazardous Wastewater

A 10,000-gallon Baker Tank was used to store decontamination water generated from drilling and sampling activities. When the tank volume approached 90 percent capacity, samples were collected and analyzed for radionuclides, VOCs, SVOCs, TAL metals, and pH. The analyses were performed by STL. Following receipt and evaluation of the sample results, arrangements were made for disposal.

Russell Reid was contracted to pump out the water from the tank and transport it to the Nassau County Bay Park Scavenger Waste Disposal Facility. Non-hazardous bills of lading were generated to document shipping and disposal.

9.2.2.2 Methanol Waste

The wastewater generated from the on-Site analytical service, operated by SEI, consisted of less than five percent methanol and part per billion (ppb) levels of VOCs. The laboratory analysis indicated the mixture was non-flammable, neutral pH, and non-hazardous (40 CFR Parts 260-265).

Approximately 500 gallons of the liquid laboratory waste was consolidated with the excavated soils and shipped to Envirocare for disposal.

9.2.2.3 Hazardous Liquid Waste

On July 1, 2003, a UST was encountered during excavation of Cell 2 (URS 2004a). The UST capacity was approximately 6,000 gallons and contained approximately 875 gallons of liquid and sludge. The liquid and sludge contents were sampled and tested individually for radionuclides, total VOCs, TCLP VOCs, TCLP SVOCs, TCLP metals, TCLP herbicides and pesticides, pH, reactivity, ignitability, alkalinity and percent moisture. The liquid and sludge was found to be corrosive (pH of 13.3 and 12.6, respectively). PCE was reported in both the sludge [11,000 micrograms per kilogram ($\mu\text{g}/\text{kg}$)] and the liquid [38,000 micrograms per liter ($\mu\text{g}/\text{L}$)]. The sludge contained U-238, U-234, and U-235 at 24,500, 23,500, and 1,290 pCi/g, respectively, as well as Th-232 at 111 pCi/g. The liquid contained U-238, U-234, U-235, and Th-232 at 235,000, 231,000, 13,000, and 3,400 pCi/L, respectively. Based on these analyses, the contents were solidified by adding Liqui-Sorb[®] 200; the tank was double wrapped in plastic, placed into a shipping container, and transported by railcar for disposal at Envirocare. Contaminated soils surrounding the tank were excavated, placed in Lift Liners[™], and transported by railcar to Envirocare for disposal.

On March 1, 2004, during the excavation of Cell 10, a 3,400-gallon abandoned UST was encountered in subcells I20 and J20 (URS 2004d). The tank was in good condition with no visible punctures or signs of leakage. The tank contained approximately 14 inches of unknown product consisting of 6 inches of liquid overlying 8 inches of sludge. The tank contents were sampled for radionuclides, total VOCs, TCLP VOCs, TCLP SVOCs, TCLP metals, TCLP herbicides and pesticides, ignitability, reactive cyanide and sulfide, corrosivity, and pH. The

liquid was found to be corrosive (pH of 12.9). The sludge contained U-238, U-234, and U-235 at 18,600, 18,200 and 910 pCi/g, respectively.

Approximately 400 gallons of liquid were pumped out of the UST and into eight USDOT approved 55-gallon poly drums. The drums were overpacked into two B25 containers (USDOT specification steel-walled boxes). MHF-LS, via Priority Transport, shipped the 3,820 lbs of waste by truck to Envirocare. This waste was manifested (NYG 4026726) as D002 based on its high pH. Prior to disposal, the waste was treated (neutralized) at Envirocare. Subsequently, the UST was sectioned into pieces and placed in Lift Liners™ for disposal at Envirocare (URS 2004d).

The sludge was mixed inside the UST with Liqui-Sorb® 200, manufactured by Chemdal Corporation, to solidify the contents. The UST was then cut apart exposing the solidified content. The UST was sized into pieces approximately 3 foot by 3 foot. The UST pieces and the solidified content were then mixed with excavated soil from Cell 10, placed into Lift Liners™, and shipped to Envirocare for disposal.

As noted in Section 2.3, three USTs associated with fueling operations were taken out of service and removed from the 100 Property in 2003, prior to remediation of the area (GTEOSI 2003c). Sludge, scale, diesel fuel and metal chips were transported by Muller Environmental for disposal by Philips Services in Bayshore, New York. Soils around the USTs and piping were screened and placed in Lift Liners™ for disposal at Envirocare. The tanks were transported to Mid Island Salvage Corp. of Deer Park, New York for disposal.

9.3 DOCUMENTATION/MANIFESTING

Documentation was generated for each waste shipment, including the Railcar Inspection Form, Transport Vehicle Release Checklist (a daily checklist for trucks and packages), straight bill of lading, NRC 741 form for SNM material and an NRC 540 and 541 form for LLRW. A New York Hazardous Waste Manifest was completed for mixed waste shipments. Copies were provided to the Priority Transport truck driver, the New York Atlantic Railroad, and the on-Site shipping files; Envirocare received the original signed manifest by mail. Electronic files of the NRC 540, 541, and 741 forms and New York Hazardous Waste Manifests were sent to Envirocare.

Upon receipt and acceptance of the shipment, Envirocare signed the original manifest and mailed a copy of the NRC 540 form to GTEOSI. Similarly, upon placement of the waste into the landfill, the Certificate of Disposal (with the date of disposal) was sent to GTEOSI. Documentation received from Envirocare was filed with the appropriate manifests on Site. Envirocare also sent copies of New York Hazardous Waste Manifests to the States of Utah and New York.

9.4 WASTE TRANSPORTATION

The Lift Liners™ were manifested and loaded onto a flatbed truck (Appendix C, Photographs 46 and 47) for the 0.5 mile trip to the rail spur located at West John Street. Waste transportation was

performed pursuant to the Traffic Control Plan provided in Appendix C of the Work Plan. At the siding, the Lift Liners™ were loaded into polypropylene-lined steel gondolas (Appendix C, Photographs 48 through 52) and, from there, shipped to Envirocare for disposal.

Table 6 presents a summary of waste shipments by category, waste profile, and quantities shipped along with the documentation accompanying the various types of shipments. The table is sorted in order of quantities shipped from highest to lowest.

Table 6. Wastes by Category, Profile, and Quantity

Waste Category	Profile Number	Number of Containers Representing Each Waste Category	Documentation (Paperwork or Manifest)	Comments
NORM	0840-01	8856 Lift Liners™ 2 Intermodals	NRC 540 and 541 manifest and land disposal restriction (LDR)	8858 out of 9206 containers shipped as NORM
SNM	0840-04	232 Lift Liners™	NRC 540 and 541 manifest, LDR and NRC 741	232 out of 9206 containers shipped as SNM (LLRW)
Mixed Waste	0840-03	105 Lift Liners™ 1 Sea Land Container	NRC 540 and 541 manifest, Uniform Hazardous Waste Manifest, LDR and NRC 741	106 out of 9206 containers shipped as mixed waste [LLRW and D039 (PCE and TCE)]
Liquid Mixed Waste	0840-06	8 drums	NRC 540 and 541 manifest, Uniform Hazardous Waste Manifest and LDR	8 out of 9206 containers shipped as mixed waste [LLRW and D002 (corrosive)]
Treatment Sample (liquid mixed waste)	0840-05	1 drum	NRC 540 and 541 manifest, Uniform Hazardous Waste Manifest and LDR	1 out of 9206 containers shipped as mixed waste treatment sample [LLRW and D002 (corrosive)]
Mixed Waste Not Needing Treatment	0840-02	0 containers	NRC 540 and 541 manifest, Uniform Hazardous Waste Manifest, LDR and NRC 741 (if applicable)	No containers were shipped
Sources (Needing Encapsulation)	SC Radioactive Waste Transport Permit No. 5201-31-06-Y Manifest AL-2005-163	1 drum	NRC 540 and 541 manifest, Uniform Hazardous Waste Manifest, LDR and NRC 741 (if applicable)	Container shipped to Alaron, Wampum, PA. The Calibration Sources used in the on-Site analysis facility were encapsulated and disposed at Chem-Nuclear Systems-Duratec, Barnwell, SC, in June 2006.

10.0 PHASE I COMPLETION

Individual cell reports (*Attainment of Radiological and Chemical Cleanup Levels*), using on-Site analytical data, were submitted to NYSDEC following the completion of each cell excavation and served as the formal request for approval to backfill. Each report provides details specific to the cell including depths of the excavation, gamma radiation walkover survey results, and CF sample results with the MARSSIM evaluation.

Radiological data collected (surface gamma scans, in-situ screening, and on- and off-Site analytical results) were compared to Site cleanup levels and used in the MARSSIM analysis (Section 8.0). Chemical data collected (field screening and/or on- and off-Site analytical results) were compared to the Site cleanup levels to assess removal of both VOC- and Ni-impacted soils and evaluate the completion of excavation. Characterization efforts continued until either the on-Site analytical results indicated that the Site cleanup levels had been achieved or the depth of excavation had reached the limits of the engineering controls. Samples used to demonstrate that the Site cleanup levels were met (CF) were a conditional indication that sufficient excavation had occurred. These results were verified by VF samples. VF sample results indicate that the remediation effort met the Site cleanup levels in Cells 2, 3, 5, 6, 7, 8, 10, 11, 12, and 14.

The Phase I soil remediation STL laboratory data indicates that residual uranium remains in the soil above Site cleanup levels in Cell 1, Cell 9, and Cell 13. The data also indicates that residual Th-232 remains in the soils above the Site cleanup level in Cell 9. However, the MARSSIM analysis which evaluates the radioactivity over a given area indicates that soils remaining at the surface after excavation in the 14 excavation cells achieved Site cleanup levels specified in the Work Plan for isotopes of uranium and thorium. The Phase I soil remediation STL data also indicates that residual PCE was found to remain in the soil above Site cleanup levels in Cell 4 and residual Ni concentrations remain in the soil above the Site cleanup level in Cell 9.

10.1 PHASE I SURVEY RESULTS

The Phase I survey, discussed previously in Section 8.0, provided the protocol for demonstrating that Site cleanup levels had been attained in each of the 14 excavation cells on the Site. The presentation of the MARSSIM statistical evaluation of the samples and the interpretation of the walkover surface survey contained in the individual *Cell Status Reports*. The contents of the 14 *Cell Status Reports* were described previously in Section 7.10, and the individual reports are contained in Appendix B to this report. A summary of the statistics from the *Cell Status Reports* is provided in Table 7.

Table 7. Summary of Phase I Assessment for Individual Cells

Cell No.	Area (m ²)	Actual Number of Soil Samples ¹	Average Concentration (pCi/g) Remaining Post-Excavation ²				Average Sum of Ratios ³	Walkover Survey	
			Th-232	U-234	U-238	Total Uranium		Number of Readings	Approx. Percent Coverage
1	528	44	0.27	15.7	16.0	32.6	0.42	429	74
2	335	34	0.19	2.05	1.98	4.34	0.11	931	74
3	528	48	0.16	1.43	1.37	2.87	0.09	647	92
4	902	86	0.37	2.27	2.17	4.60	0.18	1,023	81
5	258	22	0.17	1.62	1.56	3.30	0.09	186	78
6	860	70	0.30	4.64	4.63	9.52	0.22	756	87
7	598	51	0.36	3.17	2.96	6.34	0.19	521	52
8	534	56	0.52	3.42	3.20	6.84	0.25	1,128	79
9	680	66	0.44	7.82	7.25	14.7	0.30	479	78
10	513	47	0.21	3.70	3.31	7.26	0.15	521	94
11	497	51	0.31	2.41	1.70	3.87	0.12	1,226	90
12	136	13	0.21	0.56	0.52	1.11	0.08	162	41
13	897	74	0.51	4.13	2.67	7.09	0.25	1,986	71
14 ⁴	2,901	247	0.71	1.82	1.77	3.74	0.29	2,444	82

Notes:

- 1 The COMPASS Software Surface Soil Sample Plan calculated that N=13 was a sufficient number of samples for each cell except for Cell 1 (N = 22) and Cell 14, Survey Unit 2 (N = 14).
- 2 The average concentration for each radionuclide was determined by using the minimum detectable activity (MDA) concentration for sample results reported as less than the MDA.
- 3 The SOR average value listed is calculated for Th-232 and total Uranium (U-234, U-235, and U-238).
- 4 Due to the total area of Cell 14, the MARSSIM evaluation was performed by dividing the cell into two survey units, each less than the 2,000 m², the maximum survey unit area recommended by the MARSSIM. The values reported here are for the entire Cell 14.

10.1.1 COMPASS Software Report Description

The COMPASS Software, version 1.0.0, was used to aid in the evaluation of VF floor radiological sample results using the Sign Test, a non-parametric statistical test that evaluates the whole data set to determine if the applicable Site cleanup levels have been met. The COMPASS Software has five basic report functions, three of which were routinely used to evaluate the radiological sample results from STL. A summary of the information provided in each of the three COMPASS Software reports follows. The COMPASS Software report for each cell is provided as Attachment C of each of the Cell Status Reports in Appendix B of this report.

10.1.1.1 COMPASS SOFTWARE Site Report

The *COMPASS Software* Site Report provides a summary of the radiological contaminants that may be present on the Site and the Site cleanup levels for each radionuclide. Each Site cleanup level is identified using the MARSSIM term of design concentration guideline level (DCGL_w). Also provided in the Site Report are area factors that can be used for elevated measurement comparisons if necessary. The Site Report contains pre-excavation information and data that applies Site-wide; thus it is identical in each of the 14 *Cell Status Reports*.

10.1.1.2 COMPASS SOFTWARE Surface Soil Survey Plan

The Surface Soil Survey Plan is designed to be used in the planning phase for performing a survey of a SU to evaluate if it has been remediated to meet Site cleanup levels. For this project, a SU is a cell. Part of the information provided in this report is the minimum number of samples required to be collected based on the anticipated concentrations of each radionuclide for the Sign Test results to be statistically significant. The actual number of samples [presented in the Data Quality Assessment (DQA) Surface Soil Report] in cells was equal to or greater than the minimum necessary, such that statistical sufficiency was met for each of the cell assessments.

10.1.1.3 COMPASS SOFTWARE DQA Surface Soil Report

The DQA Surface Soil Report presents the results of the non-parametrical statistical analysis using the Sign Test on the VF floor sample results. The report provides the *Assessment Conclusion*, which for the cells on this Site was *Reject Null Hypothesis (Survey Unit PASSES)*.

Other information presented in the report is either input information that is restated in the report or is information related to the performance of the Sign Test. Near the end of the report is a table titled *Basic Statistical Quantities Summary*. In this table, one of the values listed is the average or mean SOR. This is a value calculated by determining what fraction the average concentration for each radionuclide is of its Site cleanup level and then adding each of these fractions. This SOR statistic is a common method used to evaluate compliance when multiple contaminants are present.

10.2 SHEET PILE REMOVAL/DECONTAMINATION

At the completion of Phase I Soil Remediation, the steel sheet piling was removed with the exception of an area adjacent to the south and east sides of the 100 Building. As the steel sheets were removed, both sides of the sheets were surveyed for radiological and chemical contamination (Appendix C, Photograph 53). Areas of a sheet indicating radiological contamination were marked for further decontamination. No chemical contaminants were detected. The sheet was moved into an enclosure where loose soils were removed. The removed soils were collected for analysis and subsequent disposal.

Following initial cleaning, both sides of the sheet were scanned for radiological contamination. Areas on the sheets that exceeded the regulatory-based unrestricted release criteria were marked

and segregated for additional decontamination. Following decontamination, the sheets met the radiological criteria to be released for unrestricted use.

10.3 RAIL SPUR GAMMA WALKOVER SURVEY

The rail spur located at 497 West John Street, Hicksville, New York was used for transporting waste to the disposal facility. The spur is approximately 0.5 miles southeast of the Site and is oriented north-south, extending approximately 850 feet north from the connecting Long Island Railroad Line on the south end, bounded on the north by West John Street (point of entry), and on the east and west by commercial properties. The operations area was limited to a 350-foot central section of the spur where sealed waste packages were loaded from trucks onto gondolas by crane.

The loading process was monitored on a continuous basis by visual observation and qualitative radiological surveys to verify waste packages were not breached. No waste packages were breached. In addition, two gamma walkover surveys were performed at the spur: one prior to the beginning of operations and one following the completion of operations. Both surveys were performed using the RM/LPS as described in Section 8.2.1. The survey was limited to radiological gamma surface scans only; no media sampling was authorized by the spur owner, NY&ARW.

The survey data was processed using the survey interpretation methods (CFD and posting plots) described in Section 8.2.4. The pre- and post-operations surveys were compared and demonstrated that there was no increase in the radiological levels. Based on the continuous assessment of shipping operations combined with the evaluation of the pre-and post-operations surveys, there was no detectable contribution of radioactivity to the spur from Site shipping operations.

10.4 OTHER SITE INVESTIGATIONS

The focus of the soil remediation in Phase I reported herein was on areas east and southeast of the 140 Building, east, south and southeast of the 100 Building, and on areas northeast of the 70 Building (Figure 2). Investigations in support of the Phase I remediation and additional investigations not in direct support of the Phase I remediation were performed to validate assumptions regarding the non-impacted status of areas peripheral to the excavations, to follow-up on suspected areas revealed during excavation, to evaluate locations where LPHs had been identified in Site records, to describe soil characteristics and groundwater dynamics beneath the Site, to investigate areas with known or suspected impacts, and to provide Site-specific data to model the potential transport of residual uranium beneath the Site down to and in shallow groundwater. These investigations are briefly described in the following section and documented in separate reports identified below.

10.4.1 Subsurface Soil Investigations

A number of investigations were performed to evaluate subsurface conditions below areas that were not excavated or in excavated areas beyond the depths accessible by the installed sheet pile.

West of the 140 and 100 Buildings and Southwest of the 100 Building: Survey Units 01 and 02

This investigation was performed to investigate radionuclides, TCE, PCE and Ni located in specified unexcavated areas of the Site according to guidance in the plan, *Systematic Subsurface Sampling and Analysis Plan, West of the 140 and 100 Buildings and Southwest of the 100 Building*, dated September 2004. This Subsurface Soil Sampling and Analysis Plan (SSSAP) was approved by NYSDEC in a letter dated October 8, 2004. The investigation field sampling was executed during the period October 2004 through January 2005, and in addition to systematic locations of soil sampling, sampling was performed to identify and delineate impacts associated with six suspected LPH locations lying within the investigation area. The results of the investigations are provided in the report, *Systematic Subsurface Soil Sampling and Analysis Report – West of the 140 100 Buildings and Southwest of the 100 Building (Survey Unit 01 and Survey Unit 02): Revision 1*, issued in November 2005.

Beneath the 100 Building: Survey Units 03, 04 and 05

This investigation was performed to investigate radionuclides, TCE, PCE and Ni located in accessible areas beneath the 100 Building. Guidance for the investigation was provided by the plan, *Systematic Subsurface Soil Sampling and Analysis Plan, Beneath the 100 Building*, dated November 2004, approved by NYSDEC in a letter dated January 31, 2005. The investigation field sampling was executed during the period February through April 2005, and in addition to systematic locations of soil sampling, the following investigations beneath the 100 Building were performed.

- An informal investigation and focused sampling was performed beneath the 100 Building prior to the SU characterizations.
- An investigation was performed to identify and delineate impacts associated with suspected LPHs beneath the 100 Building.
- An investigation was performed to identify and delineate impacts that originated from the LPHs removed during the remediation in Cell 9 south of the 100 Building.
- Additional sampling was conducted in SU04, Soil Boring 009, to further delineate residual PCE concentrations identified during the SU investigation.
- Additional borings were requested by NYSDEC and installed to supplement the SSSAP grid.
- An investigation was performed relating to a UST that was encountered in SU03.

The results of the investigations are provided in the report, *Systematic Subsurface Soil Sampling and Analysis Report - Investigation Beneath the 100 Building (Survey Units 03, 04 and 05)*, issued in November 2005. The investigation associated with the UST in SU03 was the subject of the *Tank Report, UST H, 100 Building, 100 Cantigue Rock Road, Hicksville, New York*, issued in May 2006.

Beneath the 140 Building: Survey Units 06 and 07

This investigation was performed to investigate radionuclides, TCE, PCE and Ni located in specified areas of the Site according to guidance in the plan, *Systematic Subsurface Sampling and Analysis Plan, Beneath the 140 Building*, dated November 2004. This SSSAP was approved by NYSDEC in a letter dated January 31, 2005. The investigation field sampling was executed during the period February through April 2005, and in addition to systematic locations of soil

sampling, sampling was performed to identify and delineate impacts associated with three suspected LPH locations lying within the investigation area. The results of the investigations are provided in the report, *Systematic Subsurface Soil Sampling and Analysis Report – Investigation Beneath the 140 Building (Survey Unit 06 and Survey Unit 07)*, issued in November 2005.

Investigation and Remediation of Soils North of the 140 Building

A report has been prepared to provide the results of the soil investigation and limited excavation performed north of the 140 Building at the Site. The work was performed on a narrow strip of surface and subsurface soils located between the 140 Building north wall and the 140 Property north boundary property line. This strip of soil is approximately 5 feet wide (north-south) and 500 feet long (east-west). The results of the program are provided in *Systematic Subsurface Soil Sampling and Analysis Report – Investigation and Remediation of Soils North of the 140 Building: Revision 1*, issued in October 2005.

Sampling Below Excavation in Cells 3, 4, 12, 14, and GCDR

Due to possible residual PCE impacts above Site cleanup levels in the southeast corner of Cell 3 (subcell W15) and the adjacent northeast corner of Cell 4 (subcells V16, W16, and W17) below remediation excavation depths, a subsurface soil investigation was conducted at locations in and around these areas. On the basis of on-Site sample analytical results generated during this investigation, boring locations extended into Cells 12 and 14 and the GCDR. The objective of this investigation was to delineate residual VOC impacts in these areas. At the request of NYSDEC, samples were also collected for metals analyses (Ni and Be). There were a total of 35 borings advanced to complete delineation of subsurface impacts in Cells 3, 4, 12, 14 and the GCDR. The analytical results are provided in the report *Systematic Subsurface Soil Sampling and Analysis Report – Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation: Revision 1*, issued in October 2005.

Beneath the 100 Building and Cells 8 and 9

This investigation was performed to delineate residual uranium and Ni in Cell 9 remaining at the completion of excavation. Focused sampling of the areas in and around LPH08 (subcell G29) and LPH10 (subcell E20) was conducted and indicated a convergence of impacted soils. A total of 64 borings were advanced to 67 ft bgs in Cell 9, Cell 8, and beneath the 100 Building to complete the delineation of impacts associated with Cell 9. At the request of NYSDEC, samples were collected and analyzed for Be. To be consistent with the sample protocol in the Work Plan, samples were collected and analyzed for VOCs. The analytical results are provided in the report *Systematic Subsurface Soil Sampling and Analysis Report – Cell 9 Subsurface Soil Delineation: Revision 1*, issued in October 2005.

10.4.2 Historic Leach Pools Investigation

Locations for numerous leach pools were identified in historic Site records. LPHs encountered during the excavation activities were evaluated as discussed in Section 7.2 of this report, and the analytical results are provided in the individual cell closure reports included in Appendix B of this report. For suspect LPH locations not in the excavation area, an investigation plan entitled *Systematic Subsurface Soil Sampling and Analysis Plan Historic Leach Pools, September 2004, Revision 1: October 2004*, was developed. (The revision to the plan in October 2004 responded

to comments by NYSDEC in its conditional approval letter of September 2004). The field sampling was performed during the period September 2004 through April 2005; fifteen suspected LPHs were investigated. Sample analytical results, data assessments and conclusions for radiological, VOCs, Ni and Be data are provided in the report *Systematic Subsurface Soil Sampling and Analysis Report – Historic Leach Pools*, issued in March 2006.

10.4.3 Site Hydrologic and Geologic Characteristics

Several investigations were performed to define and better understand subsurface soil characteristics and groundwater flow patterns. This information is useful to develop a Site Conceptual Model and to predict the potential transport of residual Site contaminants.

Soil Characteristics and Strata

The development of an accurate description of Site lithology is important to the understanding of the infiltration of water through the unsaturated soils. The objective of the lithologic evaluation drilling and sampling program was to characterize the subsurface conditions and soil strata underlying the Site. The lithology is a major factor in controlling contaminant transport from the locations of historic Site manufacturing operations or other historic sources within the unsaturated soils to the water table. To investigate the Site lithology, a soil boring program was designed and implemented from September 2004 through May 2005 with 39 soil borings used for the preparation of the lithologic evaluation for the Site. The interpretation of the data from the Site lithologic evaluation is provided in the report *Lithologic Evaluation Report* that will be issued in the near future.

Groundwater Transport of Residual Contamination

Preliminary investigation has been performed to model groundwater transport of contamination associated with residual uranium in Site soils. The modeling uses the MULTIMED environmental transport code, Site-specific soil characteristics, and consensus exposure parameters to evaluate potential risk. The risk from potential migration to groundwater and eventual transport to a point of interest/exposure is considered with respect to the USEPA Maximum Contaminant Level (MCL) standard for uranium in drinking water. In this study, the point of interest is defined as the intersection of the Site boundary with the down-gradient path of potential groundwater transport. The modeling results are presented in two reports;

- *Potential Transport of Uranium from Subsurface Soils in Cell 1 to the Point of Interest* issued in October 2006; and
- *Potential Transport of Uranium from Subsurface Soils in Cell 6 to the Point of Interest* issued in November 2006.

11.0 CONCLUSIONS

The Phase I Soil Remediation project at the Site began on April 30, 2003 and was completed on September 23, 2004.

Radiological data collected (surface gamma scans, in-situ screening, and on- and off-Site analytical results) were compared to Site cleanup levels and used in the MARSSIM analysis. VOC and Ni data collected (field screening and/or on- and off-Site analytical results) were compared to the Site cleanup levels to evaluate the completion of excavation. Remedial efforts continued until the on-Site analytical results indicated that either the Site cleanup levels had been achieved or the depth of excavation had reached the limits of the engineering controls. CF samples analyzed on Site and used to demonstrate that the Site cleanup levels were met were a conditional indication that sufficient excavation had occurred. These results were verified by VF samples and analysis performed by an independent, off-Site laboratory, STL.

Based on Phase I STL analytical data, isolated areas of residual uranium remain above Site cleanup levels [50 picoCuries per gram (pCi/g) for U-234 and 50 pCi/g for U-238] in Cell 1 (subcell U05), Cell 9 (subcell E20) and Cell 13 (subcell J25). Residual Th-232 remains in the soils above the Site cleanup level (2.8 pCi/g above background concentrations) in Cell 9 (subcell H21). However, the residual contamination was located at or below the allowable excavation depth for the Phase I soil remediation project design and was limited to discrete areas.

Some residual PCE was found to remain in the soil above Site cleanup level (1.82 mg/kg) in Cell 4 (subcells V16 and W16). Residual Ni concentrations remain in the soil above the Site cleanup level (560 mg/kg) in Cell 9 (subcells E20, G20, and G21).

Other soil impacts detected through investigations conducted after the Phase I soil remediation and the subsequent findings are the subject of separate reports submitted to NYSDEC under separate cover. A summary and listing of these reports are included in Section 10.4 of this document.

Only a partial investigation and remediation of soils located on the 70 Property was conducted during Phase I because property access was limited due to an existing manufacturing operation. Investigation of this property along with remediation of areas beneath the existing buildings on the 100 and 140 Properties and the residual constituents noted above are anticipated to be addressed in the future.

12.0 REFERENCES

- AEA, 1954. *The Atomic Energy Act of 1954, as Amended*. Public Law 83-703, 68 Stat. 919, codified at 42 U.S.C. §§ 2011-2297h-13, August 30, 1954.
- ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.), 1995. *Method of Testing Performance of Laboratory Fume Hoods*. Atlanta, Georgia.
- AWS TrueWind LLC, 2003. *Wind Rose Graph, Hicksville, NY, (Latitude: 40:45:54, Longitude: -73:31:40.8, Elevation: 141 feet msl)*, prepared for New York State Energy Research and Development Authority (NYSERDA). Albany, NY. (<http://www.awstruewind.com/>).
- Dillon Consulting Limited, 2002. *Geophysical Surveys, Former GTE Sylvania Facility, Hicksville, New York*, January, 2002.
- Dvirka and Bartilucci, 2004. *Remedial Construction Inspection Report, Former Sylvania Electric Products Facility Site, Hicksville, New York*, prepared for New York State Department of Environmental Conservation, August, 2004.
- Dowding, Charles H., 1985. *Blast Vibration Monitoring and Control*, Prentice-Hall, Inc., Englewood Cliffs, NJ.
- Envirocon, Inc., 2002. *Excavation Test Program Summary Report, Sylvania Electric Products Facility, Hicksville, New York*, March 6, 2002.
- ERM-Northeast, 1987. *Remedial Investigation and Subsurface Investigation, Air Techniques, Inc.*, August, 1987.
- Freeze, R. A., and J. A. Cherry, 1979. *Groundwater*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
- GTEOSI, 1996. *Enclosure with a letter from Daniel York of GTEOSI to Robert Stewart*. July 1996.
- GTEOSI, 2001. *Letter Report, Surface Soil Sampling, Golf Course Driving Range to Robert Stewart*. December 21, 2001.
- GTEOSI, 2003a. *Soil Investigation in Support of the Interim Drainage System Installation. Former Sylvania Electric Products Incorporated Facility, Hicksville, New York*, July 9, 2003.
- GTEOSI, 2003b. *Borrow Soils Characterization Surveys and Sampling, Former Sylvania Electric Products Incorporated Facility, Hicksville, New York*, August 7, 2003.
- GTEOSI, 2003c. *USTs Removed from Service, 100 Cantiague Rock Road, Hicksville, New York*, September 15, 2003.

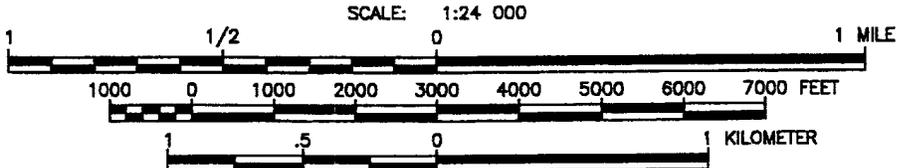
- GTEOSI, 2003d. *Borrow Soils Characterization Surveys and Sampling – Rte 109, c/o Del Drive & Rte 109, Farmingdale, NY, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY, September 23, 2003.*
- GTEOSI, 2003e. *Borrow Soils Characterization Surveys and Sampling – 111 Pit, JDP Stock Pile 2, and Commack, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY, October 17, 2003.*
- GTEOSI, 2003f. *Borrow Soils Characterization Surveys and Sampling – Mercy Hospital Stockpile, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY, October 23, 2003.*
- GTEOSI, 2003g. *Borrow Soils Characterization Surveys and Sampling – Round Swamp and Winding Stockpile, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY, October 23, 2003.*
- GTEOSI, 2004. *Cell 11: Analytical Results of the Tube. Former Sylvania Electric Products Incorporated Facility, Hicksville, New York, March 18, 2004.*
- Kilburn, C. 1979. *Hydrogeology of the Town of North Hempstead, Nassau, Long Island, New York*, Long Island Water Resources Bulletin 12.
- NAEVA Geophysics Inc. (NAEVA), 2003. *Results of Geophysical Investigation, Portion of a Former Sylvania Electric Products Facility, 70, 100, and 140 Cantiague Rock Road, Hicksville, New York, July 12, 13, and 17, 2003.*
- NAEVA, 2004. *Results of Geophysical Investigation, Former Sylvania Electric Products Facility, 100-140 Cantiague Rock Road, Hicksville, New York, September 20-24 and 28, 2004.*
- National Academy of Sciences, 1994. *DOE Methods for Evaluating Environmental and Waste Management Samples*, US Department of Energy (USDOE), October 1994.
- New York State Department of Environmental Conservation (NYSDEC). 2000. *Analytical Services Protocol (ASP)*. Guidance documents including Exhibits A, B, C, D, E, F, G, H, and I, June 2000.
- NYSDEC, 1993. *Cleanup Guideline for Soils Contaminated with Radioactive Materials*, September 1993.
- New York State Department of Health (NYSDOH), 2000. *New York Department of Health Generic Community Air Monitoring Plan.*

- New York State Department of Labor (NYS DOL), 1997. *Letter from Rita Aldrich of the NYS DOL to Barbara Youngberg of the New York State Department of Environmental Conservation*, March 21, 1997.
- Nuclear Waste Policy Act of 1982 (NWPA 1982), as Amended. *Public Law 97-425, 96 Stat. 2201*, codified at 42 U.S.C. §§ 10101-10270, January 7, 1983.
- O'Brien & Gere, 1998a. *Voluntary Cleanup Program Application - Exhibit B, Investigation Work Plan*, March 1998, (Revised May 1998).
- O'Brien & Gere, 1998b. *Ground Penetration Radar Survey and Exterior Radiation Survey Results, Hicksville, NY*.
- O'Brien & Gere, 2000a. *History Report, Former Sylvania Electric Products Incorporated Facility, Cantiague Rock Road, Hicksville, New York*, July 2000.
- O'Brien & Gere, 2000b. *Investigative Report, Former Sylvania Electric Products, Inc. Facility, Hicksville, New York*, January 2000 (Revision 2: December 2000).
- O'Brien & Gere, 2001. *Supplementary Investigation Report, Former Sylvania Electric Products, Inc. Facility, Cantiague Rock Road, Hicksville, New York*, March 2001 (Revision 1: July 2001).
- RAE Systems, 2002. *Technical Note 106, Correction Factors, Ionization Energies, and Calibration Characteristics*, Rev. 13. Sunnyvale, California.
- Science Applications International Corporation, 2000. *Laboratory Data Validation Guidelines for Evaluating Radionuclide Analysis* (143-ARCS-93.08 Revision 06 June 2000).
- Technical Memorandum, 2004. *Cell 11: Analytical Results of the Tube*, March 18, 2004.
- URS, 2001. *Letter report to Mr. Alvin E. Ludwig, GTE Operations Support Incorporated*, January 24, 2001.
- URS, 2002. *Monitoring Well Installation and Ground Water Investigation, Former Sylvania Electric Products, Incorporated, Facility, Cantiague Rock Road, Hicksville, New York*, February 28, 2002.
- URS, 2003a. *Soils Report Fall 2002, Former Sylvania Electric Products Incorporated Facility, Hicksville, New York*, March 2003.
- URS, 2003b. *Additional Soil Borings, April 2003, Former Sylvania Electric Products Incorporated Facility, Hicksville, New York*, July 29, 2003.
- URS, 2003c. *Asbestos Project/Air Monitoring During Asbestos Abatement at the Building Located at 140 Cantiague Rock Road, Hicksville, NY*, June 2, 2003.

- URS, 2003d. *Asbestos Project/Air Monitoring During Asbestos Abatement – Phase II at 140 Cantiague Rock Road, Hicksville, NY*, October 31, 2003.
- URS, 2003e. *Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile Located at JDP Yard, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY*. December 17, 2003.
- URS, 2004a. *Tank Report, Cell 2, 140 Cantiague Rock Road, Hicksville, New York*. January 6, 2004.
- URS, 2004b. *Borrow Soils Characterization Survey and Sampling: Sampling at Spagnoli Road (SPAG 2), Melville, NY, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY*. March 23, 2004.
- URS, 2004c. *Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road (SPAG 2), Melville, NY, Former Sylvania Electric Products Incorporated Facility, Hicksville, NY*. July 12, 2004.
- URS, 2004d. *UST Report, Cell 10, 100 Cantiague Rock Road, Hicksville, New York*. July 12, 2004.
- URS and Envirocon, Inc., 2005a. *Systematic Subsurface Soil Sampling and Analysis Report – Investigation and Remediation of Soils North of the 140 Building: Revision 1*, October 2005.
- URS and Envirocon, Inc., 2005b. *Systematic Subsurface Soil Sampling and Analysis Report – Cell 9 Subsurface Soil Delineation: Revision 1*. October 2005.
- URS and Envirocon, Inc., 2005c. *Systematic Subsurface Soil Sampling and Analysis Report – Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation: Revision 1*, October 2005.
- URS and Envirocon, Inc., 2005d. *Systematic Subsurface Soil Sampling and Analysis Report – West of the 140 100 Buildings and Southwest of the 100 Building (Survey Unit 01 and Survey Unit 02): Revision 1*, November 2005.
- URS and Envirocon, Inc. 2005e. *Systematic Subsurface Soil Sampling and Analysis Report – Investigation Beneath the 100 Building (Survey Units 03, 04 and 05)*, November 2005.
- URS and Envirocon, Inc., 2005f. *Systematic Subsurface Soil Sampling and Analysis Report – Investigation Beneath the 140 Building (Survey Unit 06 and Survey Unit 07)*, November 2005.
- URS and Envirocon, Inc., 2006a. *Systematic Subsurface Soil Sampling and Analysis Report – Historic Leach Pools*, March 2006.

- URS and Envirocon, Inc., 2006b. *Tank Report, UST H, 100 Building, 100 Cantiague Rock Road, Hicksville, New York*, May 2006.
- URS and Envirocon, Inc., 2006c. *Potential Transport of Uranium from Subsurface Soils in Cell 1 to the Point of Interest*, October 2006.
- URS and Envirocon, Inc. 2006d. *Potential Transport of Uranium from Subsurface Soils in Cell 6 to the Point of Interest*, November 2006.
- URS and Envirocon, Inc., 2007. *Lithologic Evaluation Report*, 2007.
- URS, et. al. 2003. *Comprehensive Soil Remediation Program Work Plan Former Sylvania Electric Products Facility*, GTE Operations Support Incorporated, (Revision 5, June 2003).
- USDOE, 1995. *Guidance for Radiochemical Data Validation*, Draft RD4, October 4, 1995.
- USEPA, 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, Third Edition, November 1986 and its updates.
- USEPA, 1999. *Compendium Method TO-15: Determination of Volatile Organic Compounds (VOCs) in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.
- USEPA, 1999. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*.
- USEPA, 1999. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*.
- USEPA, 2001. *Region II Standard Operating Procedure (SOP) for Organic Data Review*, SOP HW-6, rev. 12, March 2001.
- United States Nuclear Regulatory Commission, 2000. *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)*, NUREG-1575. Rev. 1, August.
- Vibra-Tech Engineers, Inc., 2004. *Vibration Monitoring Report for 140 Cantiague Rock Road, Hicksville, NY*, December 13, 2004.

FIGURES



NORTH

MAP REFERENCE:

PORTION OF U.S.G.S. QUADRANGLE MAP
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 HICKSVILLE, NEW YORK 1967
 PHOTOREVISED 1979
 NYSDEC: V 00089-1; URS: 27010-039



QUADRANGLE LOCATION

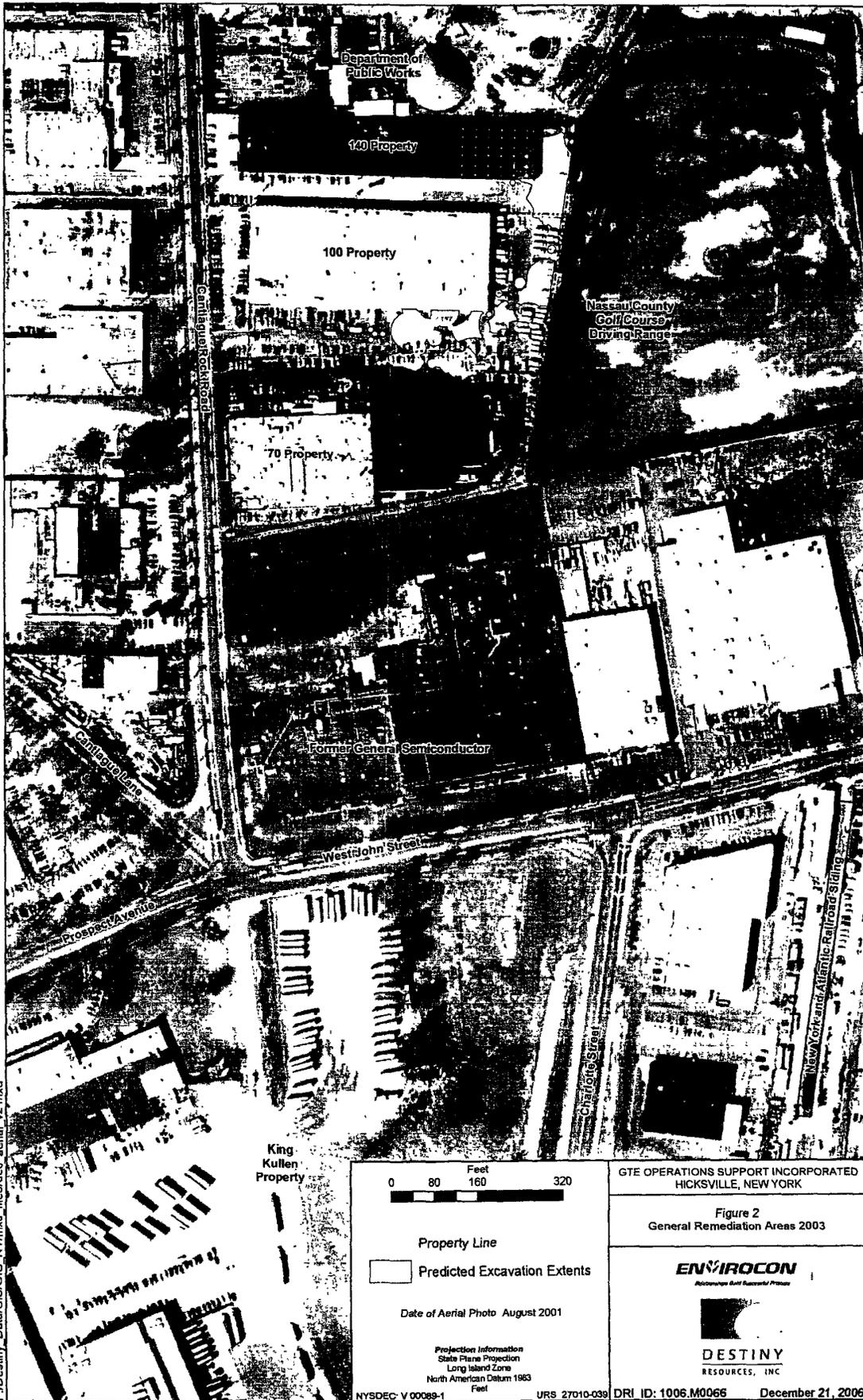
GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

FIGURE 1
 SITE LOCATION MAP

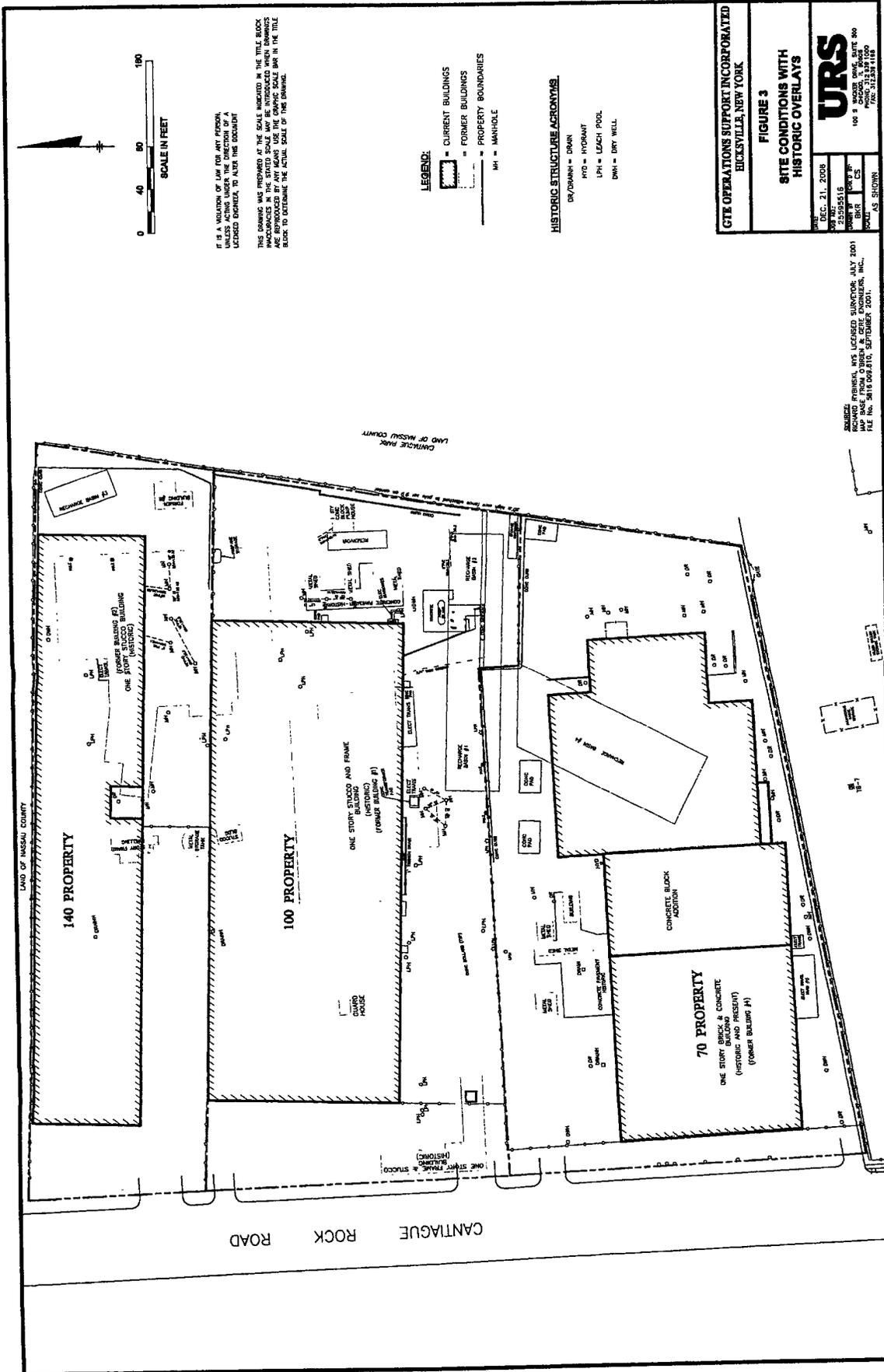
DATE: DEC. 21, 2006
 JOB NO.: 25595516
 DRAWN BY: CHR; U BY: MAR CS
 SCALE: AS SHOWN

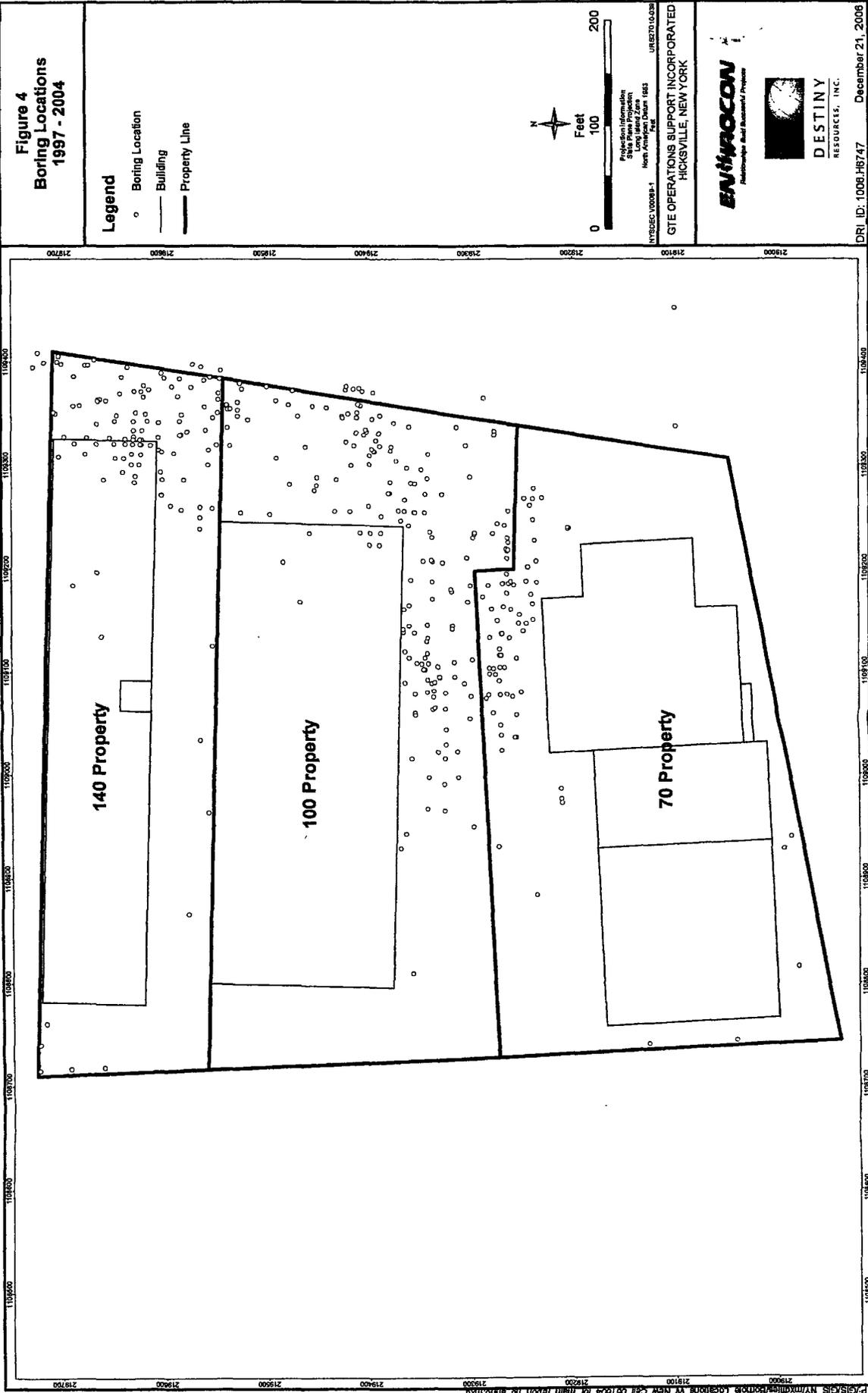


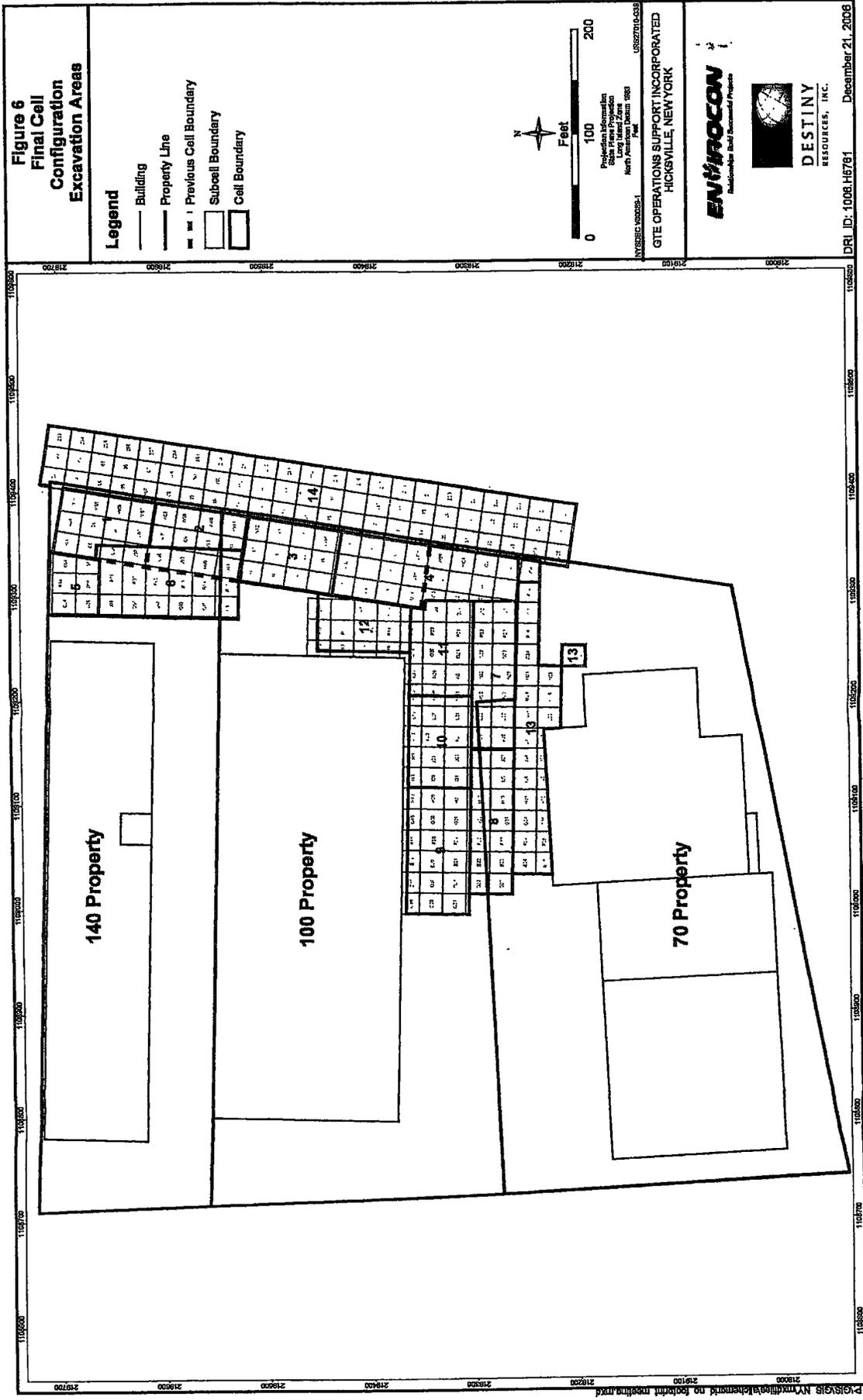
100 S. WACKER DRIVE, SUITE 500
 CHICAGO, IL 60606
 PHONE: 312.838.1000
 FAX: 312.838.4198



P:\Destiny_Data\GIS\GIS NY\mxd_files\desc_aerial_v2.mxd







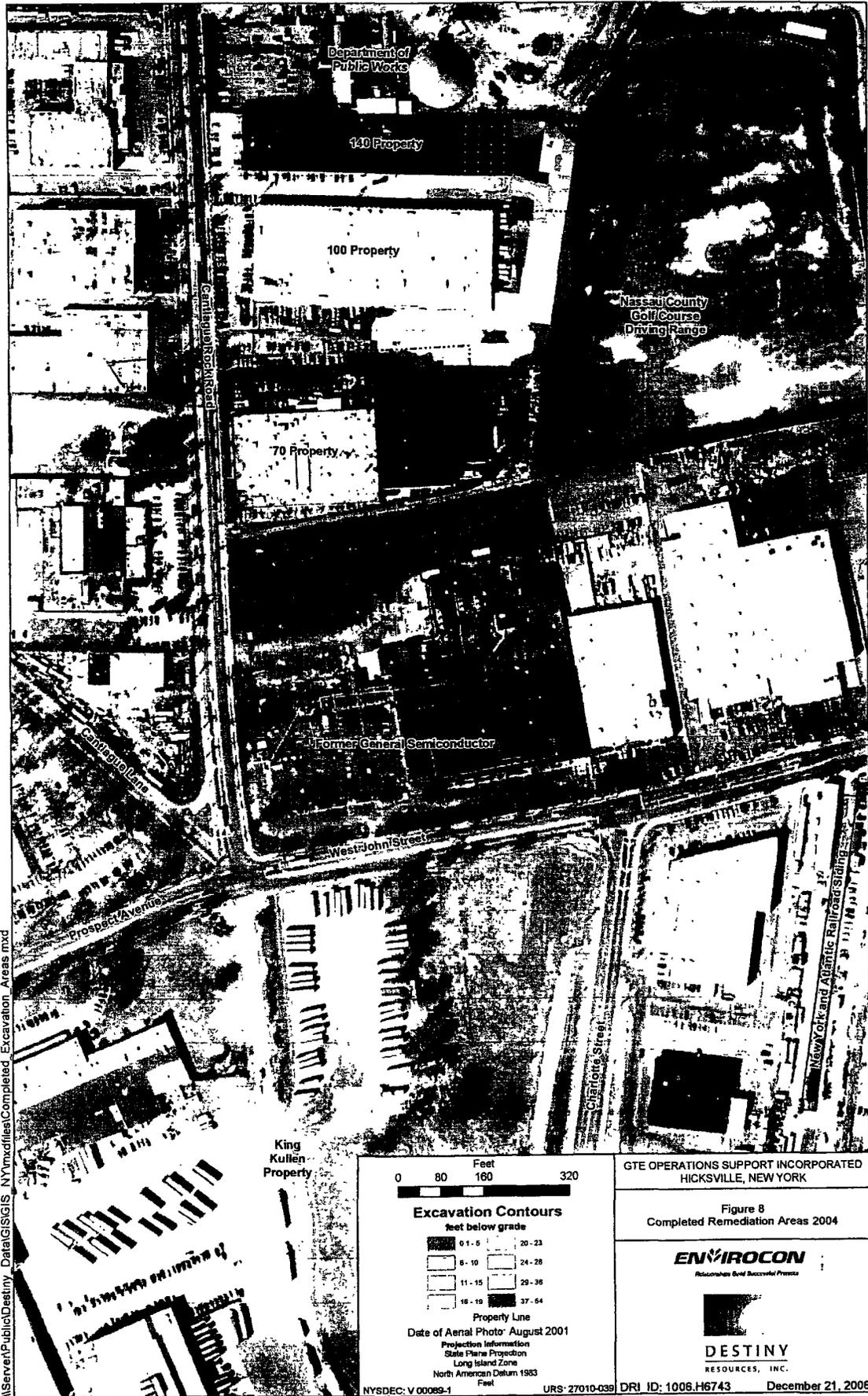


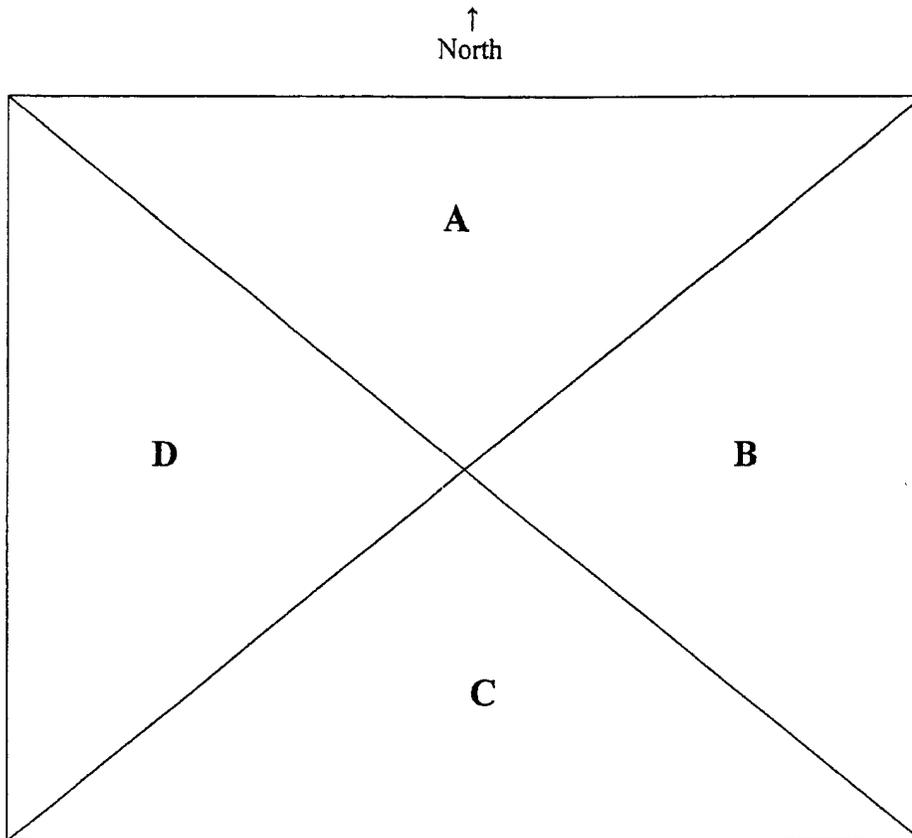
FIGURE 10 SITE ABCD SOIL SAMPLING PROTOCOL

Following excavation, Confirmation/Verification (CF/VF) soil samples are collected in each subcell to demonstrate attainment of cleanup levels.

The following samples are collected:

- Four radiological soil samples are collected following an A, B, C, and D sampling pattern and;
- The areas (A, B, C, and D) are screened with a photoionization detector (PID) to evaluate the sample location with the most elevated potential volatile organic compounds (VOCs). One chemical sample is collected biased toward the highest PID reading and analyzed for both VOCs and nickel.

This sampling pattern is referred to as the Site ABCD protocol.



This protocol was established in a Site Memo: Revised Characterization Sampling Procedures inside Cell 2 (June 13, 2003).

APPENDIX A

SUMMARY OF TRAINING AND MONITORING

A comprehensive health and safety program was designed and implemented at the Site. The program included both classroom and practical field training for occupational, chemical, and radiological hazard awareness as described below.

TRAINING

Site-specific training supplemented the Hazardous Waste Operations and Emergency Response (HAZWOPER), first aid, and cardiopulmonary resuscitation (CPR) training most workers maintain. A summary of the training is described below.

Hazardous Waste Operations and Emergency Response (40-hour HAZWOPER, 29 CFR 1910.120)

Specifically, the Site HAZWOPER training included the following components: Hazard Communication, Respiratory Protection, Fall Protection, Lockout / Tag Out Procedures, Regulations and Agencies, Hazard Communication, HAZWOPER, Site-Specific Health and Safety Plan (HASP), Toxicology, Flammables, Corrosives, Reactive & Explosive Materials, Protective Clothing, Occupational Health Program, Excavation/Shoring, Confined Space, Heavy Equipment, Instrumentation and Monitoring, and Emergency Response.

Refresher Training (8-hour HAZWOPER Refresher, 29 CFR 1910.120)

This refresher training was provided on an annual basis, and consisted of a brief review of the components described in Section B3 of the HASP, plus Site-specific lessons learned over the previous year's work.

Excavation Crew ("Mock-Up Training")

This training was provided for employees working within the enclosures providing oversight, screening, and sampling. This training consisted of practical exercises conducted under Level B and Level C Personal Protective Equipment (PPE) to simulate work conditions during these activities. Also simulated were emergency situations that could be encountered such as loss of air, man down, etc.

Loading And Securing Lift Liner™ packages

Specialized operational training was provided for workers involved in setting up, loading, securing, and handling Lift-Liner™ packages. This training consisted of a practical exercise, conducted under Level B and Level C PPE to simulate conditions that could exist in the work areas during these activities. Personnel involved performed the various job functions required for the activity, and then the exercise was critiqued.

Powered Industrial Truck Training (29 CFR 1910.178)

Several powered industrial trucks were employed routinely on Site to move drums and equipment and to stage and load Lift-Liner™ packages. This training was provided to those individuals engaged in these activities. No personnel were allowed to operate industrial trucks without this training.

Fire Extinguisher, Container Handling, Emergency Response, and Incipient Firefighting Training (“Tiger Team” Training, 29 CFR 1910.157)

As a result of the discovery of the metal tube in Cell 11, the concern was raised that pyrophoric materials potentially could be encountered during excavation activities. Select Site personnel whose duties might include incipient firefighting, container handling, first aid, or evacuation of injured workers from one of the excavation enclosures had specialized “Tiger Team” Training. Included was training on Class A, B, and C dry chemical extinguishers, as well as Class D dry powder extinguishers (combustible metals).

First Aid and CPR Training

First Aid training was provided by the American Red Cross to selected Site personnel whose duties could include administering basic first aid to other Site workers. CPR training was a part of the First Aid training held by many Site workers as part of their own companies’ basic Health & Safety training. Refresher courses were provided by their companies on their own schedule. .

Site Orientation

Site orientation training was provided to workers and guests at the Site. prior to issuance of an access badge and entry into controlled areas. This training also served as a Health and Safety Plan (HASP) orientation. Training included Site history, summary of investigations, radiological and chemical hazards, project team responsibilities, Site rules, Site controlled areas (postings and barricades) and emergency procedures.

Radiological Training

Five levels of radiological training (designated as Rad 1, 2, 3, 4 and Rad Refresher Training) were performed at the Site. These training levels were designed to comply with the training requirements for radiological workers found in 10 CFR 20, and correspond to the levels of training found in the U.S. Department of Energy Training Manual. A description of each follows:

Rad 1 - General Employee Radiological Training (GERT) was provided to all Site employees who could potentially receive occupational exposure during access to controlled areas at the Site or who were permitted unescorted access to controlled areas. These individuals were allowed to routinely enter the controlled areas and encounter radiological barriers, postings or radioactive materials. Employee responsibilities for observing and obeying radiological postings and procedures were emphasized throughout this training.

Rad 2 – Radiological Worker Training (RWT) was provided to all employees who were engaged in intrusive or potentially intrusive Site activities and who were granted unescorted access into controlled areas where they could be exposed to radioactive material. These individuals were allowed to routinely enter controlled areas and encounter radiological postings, signs, labels, and other mechanism(s) used to designate radiological areas or radiological materials that require greater levels of controls.

Rad 3 – Radiological Worker Training Practical Exercise was hands-on training provided to employees who had completed RWT and work in or needed access to areas where intrusive

activities took place, specifically in enclosures where radiological posted areas may have included Contamination Areas and Soil Contamination Areas. Workers learned proper donning and doffing of PPE and personnel monitoring techniques.

Rad 4 – Radiological Technician Training completed by Radiological Technicians either formally or at other sites where radioactive materials were present was recognized at the Site. The level of education and training of each individual Radiological Technician was evaluated and a Junior or Senior level designation was assigned accordingly.

Rad Refresher Training – Annual training was provided to workers who have previously completed RWT or higher levels of training. This training was intended to supplement previous training by emphasizing key radiological program elements and providing relevant updates to the Site's radiological program. Examples include Radioactive Materials License amendments and review of radiation exposure history.

Daily Safety Meetings

Safety meetings were held at the start of each day to discuss daily activities, potential safety concerns, issues encountered, how safety issues were addressed, general safety topics (PPE, cylinder storage, lock out / tag out, etc.), daily weather, or other relevant site information. Input and participation in these discussions by all staff was encouraged.

WORKPLACE MONITORING AND SAMPLING

Air Monitoring and Sampling

As part of the overall HASP, air monitoring and sampling within the enclosures was performed on behalf of employees. The results of this monitoring and sampling were used to determine appropriate levels of respiratory protection, and to verify they were not exposed to unacceptable levels of volatile organic vapors, particulates, and radioparticulates as described in Section 6.2.3 of this Report.

Air Monitoring

Continuous worker breathing zone air monitoring was conducted for VOCs, CO, H₂S, O₂, and total dust during intrusive activities, using real-time instruments (PID, CGI, RAM). The data was used to make decisions regarding the adequacy of the level of respiratory protection, as well as to determine whether workplace ventilation was adequate to control atmospheric hazards.

Due to the fact that the PID can measure many different volatiles and gases, elevated readings need to be qualified by use of compound-specific sampling for the data to be useful. In the event of elevated PID readings, periodic worker breathing zone monitoring was conducted (by colorimetric tubes) for PCE, TCE, carbon disulfide, and vinyl chloride. This allowed the use of Action Levels set forth in the HASP to determine the need to change / upgrade PPE.

Air Sampling

Periodic integrated air sampling was conducted in worker breathing zones for silica, VOCs (including PCE, TCE, carbon disulfide, and vinyl chloride), diesel exhaust particulates, and

beryllium. Work area air sampling was also conducted for radioparticulates. The results from this sampling were used to ensure that the action levels used with the real-time instruments were appropriate for specific contaminants. Results from the sampling were communicated to the affected employees.

Wipe Sampling

Surface wipe sampling was conducted in selected areas to address concerns about beryllium. No beryllium was found on surfaces in excess of the relevant DOE standard.

Heat-Stress Monitoring in the Enclosures

Remediation activities in the enclosures often exposed workers to elevated temperatures. This hazard was mitigated using the "Heat-Stress Monitoring in Enclosures" procedure found in the HASP.

PERSONNEL MONITORING

Bioassays

Urine bioassay sampling was performed at the Site for all workers. The purpose of the bioassay program is to estimate to what extent, if any, workers were exposed to occupational levels of internally deposited radionuclides in the work place.

Initially, the urine bioassay program required U-234, U-235, U-238, and Th-232 analyses. However, during the early stages of remediation, it was decided that Th-232 urine bioassay analyses were not practical because the potential for significant levels of internally deposited Th-232 was negligible, and urine bioassays are not the preferred method for low levels of Th-232 monitoring.

The bioassay program required that all radiological workers submit a baseline urine bioassay sample prior to the commencement of work. The workers were then selected, some randomly and some at the discretion of the radiological safety staff based on their assigned duties, to submit samples at specified intervals during the course of work. Each worker was also required to submit an exit urine bioassay sample commensurate with the end of his/her duties at the Site.

Urine bioassay samples were analyzed by Severn Trent Laboratories, Inc. in Richland, Washington (STL - Richland). These results were evaluated by the radiological safety staff to estimate the extent of intakes of occupational levels of internally deposited radionuclides (U-234, U-235, and U-238).

External Radiation Monitoring

Each worker who received RWT and was rated as Rad-2, Rad-3, and Rad-4 was supplied with a radiation dosimetry badge. The badge was worn on the employee's mid-chest area during the active time on Site and stored in a designated area when the worker was not on Site. Each quarter, the badges were collected and sent to Landauer, Inc. in Glenwood, IL for measurement of the employees' radiological exposure during the previous quarter. The results were supplied to employees on a quarterly basis, and notification in writing was provided to each employee in the dosimetry program of their annual exposure.

Appendix B – Cell Status Reports

Cell Status Reports are included in Volume II, Cell Status Reports for Cells 1 through 7 and Volume III, Cell Status Reports for Cells 8 through 14 and located on the CD in Appendix F.

Cell 1 Status Report

INTRODUCTION

Cell 1 is comprised of subcells U04 to U07, V04 to V07, and W04 to W07 and is located on the east side of the 140 Property (Cell 1-Figure 1 and Figure 6 of Volume 1). Excavation of Cell 1 began on April 30, 2003 and was completed on June 10, 2003. A formal request to backfill Cell 1 was submitted in a report to NYSDEC titled *Cell 1 Inaccessible Areas Evaluation* dated June 11, 2003. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces. Written approval to backfill Cell 1 was received in an e-mail from NYSDEC dated June 13, 2003 (Cell 1-Attachment A).

Cell 1 was backfilled beginning June 17, 2003 and was completed on July 7, 2003. The soils used for backfill came from the J. D. Posillico Bros., Inc. Yard (JDP Yard) in Farmingdale, NY (Stockpile 1). Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling* dated August 7, 2003. Approval to use these soils was granted from NYSDEC in an e-mail dated August 13, 2003 (Cell 1-Attachment B).

EXCAVATION DETAILS

After the completion of the Cell 1 excavation and backfilling, the excavation of Cell 2 resulted in the reconfiguration of Cells 1, 2 and 6. (See the Cell Status Reports for Cells 2 and 6 of Volume II for more details concerning the reconfiguration of these cells.) The southwest corner of subcell U05 and the western portions of subcells U06 and U07 from Cell 1 were incorporated into the newly reconfigured Cell 6 for depths greater than 25 ft bgs (Figures 5 and 6 of Volume I). The excavation and sampling in subcells U05 to U07 performed as part of the original Cell 1 excavation are reported in this document. Subsequent excavation (greater than 25 ft bgs) and sampling of the reconfigured portions of subcells U05 to U07 are presented in the report for Cell 6 Status Report.

DEPTHS OF EXCAVATION

Cell 1 was excavated to depths ranging from 7 to 25 ft bgs. The excavation depths for each subcell are provided in Cell 1-Table 1 and are shown on Cell 1-Figure 1. (See Volume I, Section 6.2.4 for a description of how the excavation depths are determined.) A total of 10,970,003 pounds of soil and debris (506 Lift LinersTM) were removed from Cell 1 and shipped to Envirocare.

ANOMALIES

During excavation of Cell 1, various anomalies were encountered. The anomalies were pieces of pipe. A list of Cell 1 anomalies along with analytical results from anomaly samples is provided in Cell 1-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 1-Figure 2. All of the anomalies encountered during excavation activities in Cell 1 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 1, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 1-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 1-Figure 4 depicts a CFD plot of the 429 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 1-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluation are provided in Cell 1-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Volume I, Sections 7.4, 7.5 and 7.6 for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 of Volume I) with the exceptions described below.

It was not possible to collect the C and D samples in subcell V06 and the A and C samples in subcell V07 due to sloughing of clean backfill material from subcell U07. This is discussed in greater detail in a report to NYSDEC titled *Cell 1 Inaccessible Areas Evaluation* dated June 11, 2003 and concurred with by NYSDEC as stated in Cell 1-Attachment A and summarized here. Subcell U07 had been sampled and backfilled and the excavation of subcells V06 and V07 was complete and awaiting CF/VF sampling when the sloughing occurred. Based on a review of the sample results for V06 locations A and B and V07 locations B and D as well as the sample results from soils removed from these subcells, no additional sampling was warranted as subcells

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

V06 and V07 had attained the cleanup levels.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Focused soil sampling was conducted in Cell 1 during April and May, 2004, following backfilling of the original configuration of Cell 1 and after elevated concentrations of U-238 were identified below the depths of excavation in adjacent Cells 5 and 6. (The focused soil sampling was performed after the reconfiguration of Cells 1, 2, and 6. All references to Cell 1 in this section refer to the reconfigured Cell 1 as shown in Figure 6 of Volume I. Borings advanced in the southwest portions of subcell U05 and the western portion of subcells U06 and U05 that were originally part of Cell 1 became part of Cell 6 as a result of the reconfiguration.) The Cell 1 focused sampling effort resulted in the advancement of 28 borings and the collection of 1,071 soil samples (Cell 1-Figure 6).

Samples were collected from each boring beginning at the final excavation depth down to 64 ft bgs in 1-foot intervals (except at intervals where insufficient sample recovery occurred). The bottom sample from each boring was an SP sample and the other samples were DL samples. (See Volume I, Sections 7.4 and 7.6 for details concerning sample collection and sample analysis protocols.) In the first two borings sampled, DL 01 and 02, an SP sample was also collected at 61 ft bgs as this was initially planned to be the final sample depth. The final sample depth was subsequently changed to 64 ft bgs (total depth 65.25 ft bgs) to be consistent with the maximum sampling depth in adjacent borings in Cells 1, 5, and 6.

Subcells U03, V03, and W03 were originally included in Cell 1N (North), later redefined as part of Cell 14. The six borings drilled in Cell 1N and the samples from these six borings are retained in the Cell 1 Status Report as the samples were barcoded with the Cell 1N location designator.

The data generated from the focused soil sampling in Cell 1 identified residual soils with uranium above the cleanup levels below the design engineering limits (Cell 1-Table 5). The focused soil sampling results for uranium were used to model the potential for transport of uranium off Site. The results of this study were reported to NYSDEC in *Potential Transport of Uranium from Subsurface Soils in Cell 1 to the Point of Interest Report*, October 2006.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 1-Table 3 and are shown on Cell 1-Figure 5. Cell 1-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analysis of all focused soil samples are provided in Cell 1-Table 5 and the boring locations are shown on Cell 1-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, the originally configured Cell 1, passed this evaluation (Cell 1-Attachment C). The analytical results for two samples were greater than the U-238 cleanup level (subcell U05, location D and subcell U07, location D); however the MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Volume I, Section 8.0 for additional details on the MARSSIM protocol. The soils from the area in subcell U07, location D, at 21.2 ft bgs was subsequently excavated as described below.

CONCLUSION

Based on STL VF results, the radiological cleanup levels were attained but the chemical cleanup levels for the originally configured Cell 1 were not attained (subcell U07, location D at 21.2 ft bgs indicated PCE at 460 mg/kg). Most of subcell U07, including the western portion of this subcell where this sample was collected, was reconfigured into Cell 6 and further excavated as part of Cell 6. The Site cleanup levels for both radiological and chemical contaminants for the reconfigured Cell 1 were attained for Cell 1.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 1-Table 1:	Subcell Excavation Depths
Cell 1-Table 2:	Anomaly Sample Results
Cell 1-Table 3:	Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 1-Table 4:	Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 1-Table 5:	Focused Soil Boring Sample Results

Figures

Cell 1-Figure 1:	Excavation Depth Contours
Cell 1-Figure 2:	Anomalies
Cell 1-Figure 3:	Post-Excavation Gamma Radiation Walkover Survey Results
Cell 1-Figure 4:	Cumulative Frequency Distribution for Cell 1 Gamma Radiation Walkover Survey Data
Cell 1-Figure 5:	Verification Floor Sample Locations and Results
Cell 1-Figure 6:	Focused Soil Boring Locations

Attachments

Cell 1-Attachment A:	E-Mail from NYSDEC to GTEOSI dated June 13, 2003
Cell 1-Attachment B:	E-Mail from NYSDEC to GTEOSI dated August 13, 2003
Cell 1-Attachment C:	MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 1-Table 1
Subcell Excavation Depths**

Cell 5	U04	V04	W04	Cell 14 (This cell was not established at the time of the Cell 1 excavation.)
	7 to 19 feet	11 to 18 feet	11 to 14 feet	
	U05	V05	W05	
16 to 25 feet	15 to 20 feet	14 to 16 feet		
Cell 6	U06	V06	W06	
	17 to 22 feet	13 to 19 feet	16 to 22 feet	
	U07	V07	W07	
	17 to 22 feet	14 to 18 feet	17 to 21 feet	
		Cell 2		

Notes:

- Subcell Boundary
- Cell Boundary

The cell and subcell configurations shown are prior to the reconfiguration of Cells 1, 2 and 6.

Excavation depths are approximate.

Cell 1-Table 2
Anomaly Sample Results

Pipe	5/2/2003	00026	A1-502	W04	2" (dia.)	Metal	1	1	Under Pipe	0.93	NA	2.40	38.34	Note 1	Note 1	Note 1	Note 1	0.510	0.109 U	NS
Pipe	6/7/2003	00097	A2-507	U06	2.5" to 3" (1.3" dia.)	Metal	5	6 to 8	Inside Pipe	NS	NS	NS	NS	Note 1	Note 1	Note 1	Note 1	4.416	0.166 U	NS
Pipe	5/6/2003	00119	A3-508	U06	2" (dia.)	Metal	3.5	3.5	Under Pipe	NS	NS	NS	NS	Note 1	Note 1	Note 1	Note 1	0.027 (U)	0.027 (U)	NS
Pipe	6/8/2003	00146	A4-509	V07/M07	8" (1.3" dia.)	Metal	2	2	Under Pipe	NS	NS	NS	NS	Note 1	Note 1	Note 1	Note 1	1.4 J	0.011 J	NS
Pipe	5/20/2003	00510	A-520	W06	4" (dia.)	Tile	3	2	Under Pipe	NS	NS	NS	NS	NS	NS	NS	NS	0.887 J	0.050 (U)	NS
Pipe	5/6/2003	00148	A5-509	V07/M07	1" (dia.)	Metal	2	2	Under Pipe	NS	NS	NS	NS	Note 1	Note 1	Note 1	Note 1	1.4 J	0.011 J	NS
Pipe	5/6/2003	00056	D-508	U07	4" (dia.)	Metal (Cast Iron)	5	5	Under Pipe	1.98	NA	8.39	150-40	Note 1	Note 1	Note 1	Note 1	11.808 D	0.074 U	NS
Pipe Elbow	5/6/2003	00089	D-508	U07	6" (dia.)	Metal (Cast Iron)	5	5	Inside Pipe	NS	NS	NS	NS	Note 1	Note 1	Note 1	Note 1	36.114 D	0.092 U	NS

Analytes:
 Th-232 - Thorium-232
 U-234 - Uranium-234
 U-235 - Uranium-235
 U-238 - Uranium-238

Units:
 pCi/g - picocurie/gram
 mg/kg - milligram/kilogram
 cpm - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Qualifiers:
 U - Validation qualifier used to indicate that the result was qualified as non-detect.
 J - Validation qualifier used to indicate that the result is considered an estimate.
 LI - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
 D - Validation qualifier used to indicate that analysis was performed on a sample requiring dilution.

Notes:
 See Cell 1-Figures 2 for sample locations.
 On-site sample results are in plain text and include radionuclides (Th-232 and U-238) analyzed by the gamma spectroscopy system, volatile organic compounds (VOC and PCE) by vapor phase microextraction and capillary gas chromatography by Stone Environmental, Inc.
 NA - Analysis was not performed.
 NS - Not sampled.
 (BTU) - Results are from Seven Trust Laboratories, Inc.
 Due to an error in the laboratory data reporting program, the on-site analytical data should be interpreted to two significant figures.
 Note 1 - Field radiological information not recorded on most pipe investigation forms in Cell 1.

**Cell 1-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U04	A	00697	7.4	0.32 J	1.13	1.15			
U04	B	00698	14.1	0.050 U	4.75	4.34			
U04	C	00699	15.6	0.37 J	5.91	5.61			
U04	D	00700	13.3	0.11 J	4.05	4.74			
U04		00672	12.0				0.0025 U	0.0025 U	1.8 J
U05	A	00407	17.3	0.34 J	10.1	11.1			
U05	B	00408	16.5	0.37 J	19.4	19.6			
U05	C	00409	16.8	0.17 J	20.0	18.5			
U05	D	00434	24.9	0.50	54.4	56.5			
U05		00411	16.5				0.0026 U	0.0026 U	7.0 J
U06	A	00412	17.9	0.36 J	13.7	11.9			
U06	B	00413	18.7	0.16 J	6.3	6.3			
U06	C	00414	20.6	0.23 J	22.3	22.3			
U06	D	00415	20.6	0.32 J	18.7	19.5			
U06		00416	20.4				0.0025 U	0.0025 U	8.5 J
U07	A	00381	20.7	0.24 J	38.3	39.3			
U07	B	00382	20.6	0.17 J	34.8	37.6			
U07	C	00383	20.7	0.46	34.1	39.3			
U07	D	00384	21.2	0.81	94.3	94.3	2.8 U	460	37.3 J
U07		00385	20.7				0.0026 U	0.0055	9.0 J
V04	A	00679	11.6	0.29 J	0.99	0.68			
V04	B	00680	13.5	0.27 J	28.2	29.6			
V04	C	00681	18.2	0.075 J	10.4	10.3			
V04	D	00682	16.2	0.19 J	3.93	4.05			
V04		00673	16.8				0.0025 U	0.0025 U	1.6 J
V05	A	00701	17.3	0.16 J	9.7	10.3			
V05	B	00702	19.1	0.16 J	25.3	25.3			
V05	C	00703	18.6	0.047 U	23.2	26.5			
V05	D	00704	18.5	0.068 U	10.8	11.4			
V05		00676	19.6				0.0026 U	0.0026 U	43.3
V06	A	00713	17.4	0.27 J	41.4	41.6			
V06	B	00714	13.7	0.74	21.3	21.6			
V06		00720	17.6				0.0025 U	0.0025 U	7.2
V07	B	00715	14.2	0.54	10.7	10.5			
V07	D	00516	17.3	0.092 J	1.35	1.28			
V07		00515	17.4				0.0026 U	0.0026 U	4 U
W04	A	00685	12.1	0.21 J	0.61	0.40			
W04	B	00686	12.0	0.76	0.58	0.28 J			
W04	C	00687	12.8	0.21 U	1.16	1.29			
W04	D	00688	11.9	0.24 J	5.19	5.84			
W04		00674	12.8				0.0025 U	0.0025 U	1.8 J
W05	A	00690	14.2	0.29 J	7.8	9.2			
W05	B	00691	14.0	0.24 J	0.51 J	0.29 J			
W05	C	00692	14.5	0.18 J	8.1	8.4			
W05	D	00693	14.1	0.1 U	9.1	7.8			
W05		00675	15.1				0.0025 U	0.0025 U	2.1 J

Cell 1-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W06	A	00723	17.2	0.20 J	20.6	19.8			
W06	B	00727	17.3	0.31 J	0.81	0.30 J			
W06	C	00724	21.2	0.011 U	8.4	7.8			
W06	D	00728	21.1	0.22 J	19.5	18.8			
W06		00719	17.7				0.0025 U	0.0025 U	1.1 J
W07	A	00725	19.6	0.28 J	0.47	0.59			
W07	B	00726	17.7	0.16 J	0.59	0.21 U			
W07	C	00721	18.2	0.21 J	35.7	35.0			
W07	D	00722	19.4	0.27 J	3.53	3.44			
W07		00718	20.3				0.0025 U	0.0025 U	1.4 J

Cell 1-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 1-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

Cell 1-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (feet)	Subcell
Maximum Th-232 (pCi/g)	0.81	21.2	U07
Maximum U-234 (pCi/g)	94.3	21.2	U07
Maximum U-238 (pCi/g)	94.3	21.2	U07
Maximum TCE (mg/kg)	2.8 U	21.2	U07
Maximum PCE (mg/kg)	460	21.2	U07*
Maximum Ni (mg/kg)	43.3	19.6	V05

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

* - A major portion of this subcell, including the area of the subcell from where this sample was collected was reconfigured into Cell 6 after the Cell 1 excavation.

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U03	DL01	15235	3.0	0.77		< 4.95			
U03	DL01	15236	4.0	0.33		< 2.98			
U03	DL01	15237	5.0	0.66		< 4.45			
U03	DL01	15238	6.0	0.35		< 4.01			
U03	DL01	15275	7.0	0.23		< 3.98			
U03	DL01	15276	8.0	< 0.04		8.13 J			
U03	DL01	15277	9.0	0.34		3.52 J			
U03	DL01	15289	10.0	0.39	1.03	0.88	0.0026 U	0.00021 J	4.4
U03	DL02	15239	3.0	0.66		4.56 J			
U03	DL02	15240	4.0	0.39		< 4.04			
U03	DL02	15241	5.0	0.43		< 4.04			
U03	DL02	15242	6.0	0.51		< 3.84			
U03	DL02	15278	7.0	0.40		< 3.05			
U03	DL02	15279	8.0	0.67		6.68 J			
U03	DL02	15280	9.0	0.51		< 3.80			
U03	DL02	15281	10.0	0.27		5.33			
U03	DL02	15288	11.0	0.265	1.24	0.88	0.0026 U	0.00082 J	32.7
U04	DL10	14192	10.0	0.34		< 3.54			
U04	DL10	14193	11.0	0.49		6.72 J			
U04	DL10	14198	13.0	0.42		< 3.47			
U04	DL10	14199	15.0	0.07 UJ		< 5.43			
U04	DL10	14200	16.0	< 0.06		8.56			
U04	DL10	14206	17.0	0.27		< 2.72			
U04	DL10	14207	18.0	0.41		< 3.21			
U04	DL10	14208	19.0	0.25		< 2.76			
U04	DL10	14210	20.0	0.20		< 2.65			
U04	DL10	14216	21.0	0.06 UJ		< 4.67			
U04	DL10	14217	22.0	0.29 J		5.01 J			
U04	DL10	14218	23.0	0.23		< 2.26			
U04	DL10	14219	24.0	0.22		4.90 J			
U04	DL10	14220	25.0	0.22		5.17			
U04	DL10	14221	26.0	0.19		< 2.95			
U04	DL10	14229	27.0	0.26		4.29			
U04	DL10	14230	28.0	0.26 J		< 3.97			
U04	DL10	14231	29.0	0.19		< 3.22			
U04	DL10	14232	30.0	0.24 J		5.16 J			
U04	DL10	14233	31.0	0.20		< 3.02			
U04	DL10	14234	32.0	0.21 J		< 3.40			
U04	DL10	14238	33.0	< 0.07		< 2.04			
U04	DL10	14239	34.0	0.25		< 3.25			
U04	DL10	14240	35.0	0.32		7.19			
U04	DL10	14241	36.0	0.36		< 3.54			
U04	DL10	14252	37.0	0.20		< 2.47			
U04	DL10	14253	38.0	0.28		< 3.87			
U04	DL10	14255	39.0	0.30		< 4.13			
U04	DL10	14256	40.0	0.34		< 3.50			
U04	DL10	14257	41.0	0.24		< 2.96			
U04	DL10	14254	42.0	0.18		< 2.81			
U04	DL10	14268	43.0	0.35		< 3.56			
U04	DL10	14269	44.0	0.37		< 3.01			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	m-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PEF (mg/kg)	Nr (mg/kg)
U04	DL10	14270	45.0	0.27		< 3.52			
U04	DL10	14271	46.0	0.21		< 2.13			
U04	DL10	14272	47.0	0.45		< 4.27			
U04	DL10	14273	48.0	0.28		4.86			
U04	DL10	14274	49.0	0.41		5.02 J			
U04	DL10	14275	50.0	0.44		< 3.74			
U04	DL10	14276	51.0	0.37		6.64			
U04	DL10	14277	52.0	0.34		3.76 UJ			
U04	DL10	14278	53.0	0.43		< 3.86			
U04	DL10	14281	54.0	0.44		< 4.22			
U04	DL10	14282	55.0	0.53		< 5.69			
U04	DL10	14283	56.0	0.50		< 2.94			
U04	DL10	14285	57.0	0.49		4.02 UJ			
U04	DL10	14286	58.0	0.58		3.61 UJ			
U04	DL10	14288	59.0	0.45		4.21 UJ			
U04	DL10	14289	60.0	0.60		4.07 UJ			
U04	DL10	14315	61.0	< 0.09		4.31 UJ			
U04	DL10	14316	62.0	0.56		4.07 UJ			
U04	DL10	14317	63.0	< 0.10		4.33 UJ			
U04	DL10	14314	64.0	0.221 J	0.56	0.203	0.0026 U	0.0026 U	2.3 J
U04	DL13	14642	18.0	0.09 UJ		< 5.48			
U04	DL13	14643	19.0	0.41		< 1.77			
U04	DL13	14644	20.0	0.39		< 4.62			
U04	DL13	14645	21.0	0.23		6.87			
U04	DL13	14646	22.0	0.08 UJ		10.00			
U04	DL13	14647	23.0	0.02 UJ		12.89			
U04	DL13	14648	24.0	0.06 UJ		< 6.19			
U04	DL13	14649	25.0	0.16		6.26			
U04	DL13	14650	26.0	0.25 J		14.79			
U04	DL13	14651	27.0	0.03 UJ		< 5.05			
U04	DL13	14658	28.0	0.17		3.87			
U04	DL13	14659	29.0	0.34 J		7.51			
U04	DL13	14660	30.0	0.38		< 2.91			
U04	DL13	14661	31.0	0.26		< 3.07			
U04	DL13	14662	32.0	0.22 J		4.97 J			
U04	DL13	14663	33.0	0.24		< 2.79			
U04	DL13	14664	34.0	0.25		< 2.97			
U04	DL13	14665	35.0	0.31 J		< 4.01			
U04	DL13	14675	36.0	0.33 J		7.78 J			
U04	DL13	14676	37.0	0.37		14.87			
U04	DL13	14677	38.0	0.05 UJ		< 5.23			
U04	DL13	14679	39.0	0.27		5.44 J			
U04	DL13	14680	40.0	0.27		< 3.37			
U04	DL13	14681	41.0	0.24		3.43 J			
U04	DL13	14684	42.0	0.27		< 3.11			
U04	DL13	14685	43.0	0.19		< 2.31			
U04	DL13	14686	44.0	0.26 J		< 3.87			
U04	DL13	14687	45.0	0.19		< 2.45			
U04	DL13	14688	46.0	0.31 J		< 3.30			
U04	DL13	14689	47.0	0.34		16.87			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U04	DL13	14690	48.0	0.32 J		8.12			
U04	DL13	14691	49.0	0.44		< 5.11			
U04	DL13	14692	50.0	0.38 J		5.89			
U04	DL13	14693	51.0	0.37		5.61			
U04	DL13	14699	52.0	0.37		11.53			
U04	DL13	14701	53.0	0.43		6.41			
U04	DL13	14702	54.0	0.34		6.70			
U04	DL13	14703	55.0	0.08 UJ		7.30			
U04	DL13	14704	56.0	0.57		7.52			
U04	DL13	14705	57.0	0.35		8.70			
U04	DL13	14706	58.0	0.40 J		8.05			
U04	DL13	14707	59.0	0.54 J		10.66			
U04	DL13	14708	60.0	0.55		7.90			
U04	DL13	14709	61.0	0.48		7.78			
U04	DL13	14715	62.0	0.43 J		11.21			
U04	DL13	14716	63.0	0.56 J		10.47			
U04	DL13	14717	64.0	0.228	4.72	4.89	0.0026 U	0.0026 U	4.2 U
U04	DL14	14836	12.0	0.44		< 3.25			
U04	DL14	14837	13.0	0.34		< 2.56			
U04	DL14	14843	14.0	0.31		5.24			
U04	DL14	14844	15.0	0.34		5.81			
U04	DL14	14845	16.0	0.34		19.14			
U04	DL14	14846	17.0	< 0.07		22.05			
U04	DL14	14847	18.0	0.24		11.69			
U04	DL14	14848	19.0	0.36		< 5.17			
U04	DL14	14849	20.0	< 0.05		15.53			
U04	DL14	14850	21.0	0.23		9.53			
U04	DL14	14851	22.0	0.30		4.77 J			
U04	DL14	14852	23.0	0.16		6.92			
U04	DL14	14856	24.0	0.26		11.02			
U04	DL14	14857	25.0	0.25		8.73 J			
U04	DL14	14858	26.0	0.21		12.98 J			
U04	DL14	14859	27.0	0.21		6.77			
U04	DL14	14860	28.0	0.40		4.74 J			
U04	DL14	14861	29.0	0.18		< 4.32			
U04	DL14	14868	30.0	0.28		5.34			
U04	DL14	14869	31.0	0.28		< 2.69			
U04	DL14	14870	32.0	0.18 J		2.62 UJ			
U04	DL14	14871	33.0	0.27		< 4.78			
U04	DL14	14872	34.0	0.28		3.69 UJ			
U04	DL14	14873	35.0	0.35		6.50 J			
U04	DL14	14874	36.0	0.32		4.35 J			
U04	DL14	14875	37.0	0.22		3.98 J			
U04	DL14	14877	38.0	0.26		< 5.42			
U04	DL14	14878	39.0	0.19		3.96 J			
U04	DL14	14879	40.0	0.23		5.50 J			
U04	DL14	14880	41.0	0.30		< 4.04			
U04	DL14	14881	42.0	0.33		< 3.48			
U04	DL14	14882	43.0	< 0.08		3.11 UJ			
U04	DL14	14883	44.0	0.37		4.21 J			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U04	DL14	14884	45.0	0.25		3.64 J			
U04	DL14	14885	46.0	0.29		< 2.93			
U04	DL14	14886	47.0	0.52		3.98 J			
U04	DL14	14887	48.0	< 0.02		< 2.58			
U04	DL14	14888	49.0	0.42		3.19 UJ			
U04	DL14	14889	50.0	0.36		5.31 J			
U04	DL14	14890	51.0	0.39		< 3.97			
U04	DL14	14891	52.0	0.50		3.80 UJ			
U04	DL14	14892	53.0	< 0.09		4.53 J			
U04	DL14	14896	54.0	0.51		< 3.84			
U04	DL14	14897	55.0	0.63		< 3.46			
U04	DL14	14901	56.0	0.61		8.07 J			
U04	DL14	14902	57.0	0.40		3.05 UJ			
U04	DL14	14903	58.0	0.43		5.71 J			
U04	DL14	14904	59.0	0.44		5.51 J			
U04	DL14	14905	60.0	< 0.08		5.41 J			
U04	DL14	14906	61.0	0.32		< 4.87			
U04	DL14	14908	62.0	0.33		< 3.30			
U04	DL14	14909	63.0	0.34		3.68 UJ			
U04	DL14	14921	64.0	0.181	3.34	3.62	0.0027 U	0.00064 J	0.46 J
U05	DL01	12561	25.0	0.41		14.78			
U05	DL01	12563	26.0	< 0.05		34.94			
U05	DL01	12564	27.0	< 0.04		25.92			
U05	DL01	12565	28.0	< 0.04		22.25			
U05	DL01	12566	29.0	0.29		24.76			
U05	DL01	12567	30.0	0.30		39.81			
U05	DL01	12568	31.0	0.24		26.15			
U05	DL01	12569	32.0	0.34		14.43			
U05	DL01	12571	33.0	0.21		16.09			
U05	DL01	12572	34.0	0.27		16.53			
U05	DL01	12573	35.0	< 0.06		18.74			
U05	DL01	12574	36.0	0.18		< 5.10			
U05	DL01	12583	37.0	< 0.03		12.98			
U05	DL01	12584	38.0	0.55		51.52			
U05	DL01	12585	39.0	0.19		13.29			
U05	DL01	12588	40.0	0.29		22.56			
U05	DL01	12590	41.0	0.25		13.37			
U05	DL01	12592	42.0	0.49		31.85			
U05	DL01	12598	43.0	0.28		15.33			
U05	DL01	12599	44.0	0.53		37.02			
U05	DL01	12606	45.0	0.25		20.26			
U05	DL01	12607	46.0	0.36		22.70			
U05	DL01	12608	47.0	0.50		< 6.70			
U05	DL01	12609	48.0	0.44		12.43			
U05	DL01	12610	49.0	0.38		11.61			
U05	DL01	12611	50.0	0.37		17.81			
U05	DL01	12612	51.0	0.66		22.42			
U05	DL01	12613	52.0	0.53		19.85			
U05	DL01	12614	53.0	0.49		32.54			
U05	DL01	12615	54.0	0.54		23.87			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
U05	DL01	12617	55.0	0.51		18.91			
U05	DL01	12618	56.0	0.44		22.89			
U05	DL01	12619	57.0	0.58		33.20			
U05	DL01	12620	58.0	0.70		20.16			
U05	DL01	12621	59.0	0.42		19.76			
U05	DL01	12622	60.0	0.46		17.65			
U05	DL01	12623	61.0	0.37	11.6	12.5	0.0026 U	0.0035 J	1.7 J
U05	DL01	12751	62.0	0.44		26.10			
U05	DL01	12752	63.0	0.55		24.12			
U05	DL01	12766	64.0	0.38	15.7	16.0	0.0027 U	0.0027 U	2.0 J
U05	DL02	12646	25.0	0.38		15.63			
U05	DL02	12648	26.0	0.26		25.17			
U05	DL02	12655	27.0	0.37		7.26			
U05	DL02	12656	28.0	0.23		17.53			
U05	DL02	12657	29.0	0.30		20.67			
U05	DL02	12658	30.0	0.25		26.17			
U05	DL02	12670	31.0	0.22		65.06			
U05	DL02	12671	32.0	0.34		97.88			
U05	DL02	12672	33.0	0.26		92.69			
U05	DL02	12673	34.0	0.17		104.20			
U05	DL02	12679	35.0	0.26		62.59			
U05	DL02	12674	37.0	0.39		63.77			
U05	DL02	12675	38.0	0.43		65.86			
U05	DL02	12676	39.0	0.22		31.65			
U05	DL02	12677	40.0	0.22		22.70			
U05	DL02	12688	41.0	0.30		59.33			
U05	DL02	12689	42.0	0.34		26.18			
U05	DL02	12690	43.0	< 0.06		24.17			
U05	DL02	12692	44.0	0.29		22.06			
U05	DL02	12693	45.0	0.40		48.39			
U05	DL02	12694	46.0	0.40		18.29			
U05	DL02	12700	47.0	0.56		21.75			
U05	DL02	12701	48.0	0.48		16.77			
U05	DL02	12702	49.0	0.65		22.46			
U05	DL02	12703	50.0	0.41		16.96			
U05	DL02	12710	51.0	0.69		38.48			
U05	DL02	12711	52.0	0.41		34.39			
U05	DL02	12712	53.0	0.41		24.01			
U05	DL02	12713	54.0	0.42		22.13			
U05	DL02	12720	55.0	0.44		33.50			
U05	DL02	12721	56.0	0.55		26.53			
U05	DL02	12725	57.0	0.55		29.37			
U05	DL02	12726	58.0	0.52		29.11			
U05	DL02	12730	59.0	0.53 J		29.10			
U05	DL02	12731	60.0	< 0.07		22.16			
U05	DL02	12732	61.0	0.228	13.6	14.0	0.0013 J	0.0014 J	0.61 J
U05	DL02	12745	62.0	0.56		26.82			
U05	DL02	12746	63.0	0.42		24.80			
U05	DL02	12747	64.0	0.208	14.4	14.5	0.0011 J	0.00087 J	3.4 J
V03	DL01	15320	4.0	1.32		< 6.89			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V03	DL01	15321	5.0	0.59		< 4.55			
V03	DL01	15322	6.0	0.40		< 3.22			
V03	DL01	15328	7.0	0.39		< 3.73			
V03	DL01	15330	8.0	0.42		< 3.39			
V03	DL01	15329	9.0	< 0.07		< 3.63			
V03	DL01	15331	10.0	0.40		< 2.99			
V03	DL01	15338	11.0	0.50	0.49	0.44	0.0026 U	0.00030 J	5.8
V03	DL02	15323	4.0	0.86		< 3.78			
V03	DL02	15324	5.0	0.62		< 3.83			
V03	DL02	15325	6.0	0.44		3.23 J			
V03	DL02	15326	7.0	0.26		4.23 J			
V03	DL02	15327	8.0	0.25		< 3.04			
V03	DL02	15332	9.0	0.35		< 3.07			
V03	DL02	15337	10.0	0.59	0.55	0.39	0.0027 U	0.0027 U	4.1 J
V04	DL07	13571	19.0	0.27		13.74			
V04	DL07	13575	20.0	0.22		29.97			
V04	DL07	13576	21.0	< 0.04		11.27			
V04	DL07	13577	22.0	0.48		14.37			
V04	DL07	13579	23.0	0.22		8.92			
V04	DL07	13580	24.0	0.19		8.27			
V04	DL07	13587	25.0	0.30		12.65			
V04	DL07	13588	26.0	0.39		15.40			
V04	DL07	13589	27.0	0.38		19.12			
V04	DL07	13590	28.0	0.30		21.30			
V04	DL07	13595	29.0	0.37		23.86			
V04	DL07	13596	30.0	0.25		16.14			
V04	DL07	13597	31.0	0.23		17.34			
V04	DL07	13600	32.0	0.16		17.56			
V04	DL07	13607	33.0	0.24		21.36			
V04	DL07	13608	34.0	0.23		20.65			
V04	DL07	13611	35.0	0.24		18.72			
V04	DL07	13612	36.0	0.22		28.58			
V04	DL07	13613	37.0	0.29		21.44			
V04	DL07	13614	38.0	0.25		14.04			
V04	DL07	13620	39.0	0.47		29.82			
V04	DL07	13621	40.0	< 0.03		31.03			
V04	DL07	13622	41.0	0.31		24.41			
V04	DL07	13624	42.0	0.31		19.42			
V04	DL07	13625	43.0	0.23		15.44			
V04	DL07	13627	44.0	0.32		13.94			
V04	DL07	13634	45.0	0.42		28.38			
V04	DL07	13635	46.0	0.23		29.57			
V04	DL07	13639	47.0	0.25		23.41			
V04	DL07	13640	48.0	0.46		21.96			
V04	DL07	13650	49.0	0.41 J		14.82			
V04	DL07	13651	50.0	0.52		30.55			
V04	DL07	13652	51.0	0.51 J		15.17			
V04	DL07	13653	52.0	0.55		14.51			
V04	DL07	13656	53.0	0.51		21.27			
V04	DL07	13657	54.0	0.47 J		27.58			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V04	DL07	13659	55.0	0.55 J		18.61			
V04	DL07	13660	56.0	0.51 J		16.14			
V04	DL07	13661	57.0	< 0.08		17.92			
V04	DL07	13662	58.0	0.43		11.14			
V04	DL07	13663	59.0	0.53		13.15			
V04	DL07	13664	60.0	0.32		17.62			
V04	DL07	13668	61.0	0.49 J		21.82			
V04	DL07	13669	62.0	0.41		13.79			
V04	DL07	13671	63.0	0.32 J		17.94			
V04	DL07	13672	64.0	0.31	5.37	5.45	0.0026 U	0.0026 U	1.4 J
V04	DL08	13827	20.0	0.46		< 4.86			
V04	DL08	13828	21.0	0.19		9.86			
V04	DL08	13829	22.0	< 0.05		6.85			
V04	DL08	13830	23.0	0.26		< 5.38			
V04	DL08	13831	24.0	0.22		12.32			
V04	DL08	13832	25.0	< 0.10		< 7.62			
V04	DL08	13833	26.0	0.27		15.37			
V04	DL08	13834	27.0	0.25		16.41			
V04	DL08	13835	28.0	0.17		28.39			
V04	DL08	13846	29.0	< 0.08		71.11			
V04	DL08	13848	30.0	0.27		39.53			
V04	DL08	13849	31.0	0.26		28.83			
V04	DL08	13850	32.0	0.35		26.28			
V04	DL08	13851	33.0	0.19		17.09			
V04	DL08	13852	34.0	0.35		10.75			
V04	DL08	13854	35.0	0.27		28.74			
V04	DL08	13856	36.0	0.24		35.30			
V04	DL08	13861	37.0	0.48		17.91			
V04	DL08	13863	38.0	0.26		15.32			
V04	DL08	13884	39.0	0.28		< 5.77			
V04	DL08	13885	40.0	0.30		45.84			
V04	DL08	13886	41.0	0.19		19.87			
V04	DL08	13887	42.0	0.30		17.94			
V04	DL08	13905	43.0	0.23		25.11			
V04	DL08	13906	44.0	< 0.04		61.61			
V04	DL08	13907	45.0	0.20		24.52			
V04	DL08	13908	46.0	0.29		11.54			
V04	DL08	13910	47.0	0.33		48.15			
V04	DL08	13911	48.0	< 0.06		37.44			
V04	DL08	13913	49.0	0.81		67.62			
V04	DL08	13914	50.0	0.45		12.06			
V04	DL08	13915	51.0	0.48		14.04			
V04	DL08	13916	52.0	0.48		15.56			
V04	DL08	13925	53.0	0.42		20.84			
V04	DL08	13927	54.0	0.38		15.83			
V04	DL08	13929	55.0	0.86		20.26			
V04	DL08	13930	56.0	0.46		13.97			
V04	DL08	13943	57.0	0.47		20.84			
V04	DL08	13944	58.0	< 0.05		17.79			
V04	DL08	13946	59.0	0.47		16.77			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V04	DL08	13947	60.0	0.31		12.74			
V04	DL08	13948	61.0	0.45		12.75			
V04	DL08	13949	62.0	0.42		11.69			
V04	DL08	13973	63.0	0.41		15.05			
V04	DL08	13974	64.0	0.188	5.34	5.44	0.0026 U	0.0026 U	4.2 U
V04	DL09	14067	13.0	0.37		< 6.09			
V04	DL09	14069	14.0	0.42		3.82 J			
V04	DL09	14070	15.0	< 0.04		< 4.25			
V04	DL09	14071	16.0	0.39		< 4.51			
V04	DL09	14072	17.0	0.30		< 4.73			
V04	DL09	14073	18.0	0.34		< 3.42			
V04	DL09	14075	19.0	0.33		< 6.01			
V04	DL09	14076	20.0	< 0.05		< 3.72			
V04	DL09	14077	21.0	0.34		< 3.40			
V04	DL09	14078	22.0	0.25		< 3.60			
V04	DL09	14080	23.0	0.41		< 4.77			
V04	DL09	14083	24.0	0.32		< 4.00			
V04	DL09	14088	25.0	0.36		< 4.90			
V04	DL09	14089	26.0	0.33		< 4.34			
V04	DL09	14103	27.0	0.32		< 4.60			
V04	DL09	14104	28.0	0.27		< 3.35			
V04	DL09	14105	29.0	0.33		< 4.29			
V04	DL09	14106	30.0	0.30		< 3.55			
V04	DL09	14111	31.0	0.21		< 4.43			
V04	DL09	14112	32.0	0.37		< 4.16			
V04	DL09	14113	33.0	0.47		7.45 J			
V04	DL09	14114	34.0	0.32		< 4.03			
V04	DL09	14115	35.0	0.37		4.32			
V04	DL09	14116	36.0	0.41		4.12			
V04	DL09	14118	37.0	0.44		< 5.58			
V04	DL09	14119	38.0	< 0.10		< 6.50			
V04	DL09	14121	39.0	0.40		< 6.01			
V04	DL09	14122	40.0	0.44		< 4.89			
V04	DL09	14123	41.0	0.31		< 5.67			
V04	DL09	14125	42.0	0.47		< 6.69			
V04	DL09	14127	43.0	0.51		< 6.15			
V04	DL09	14128	44.0	0.52		< 5.14			
V04	DL09	14130	45.0	0.70		< 5.44			
V04	DL09	14132	46.0	0.54		< 5.60			
V04	DL09	14149	48.0	0.65 J		6.70			
V04	DL09	14150	49.0	0.48		< 4.48			
V04	DL09	14151	50.0	0.50		< 4.26			
V04	DL09	14152	51.0	0.56		5.29			
V04	DL09	14153	52.0	0.59 J		< 6.04			
V04	DL09	14154	53.0	0.32		< 3.24			
V04	DL09	14155	54.0	0.51		< 4.54			
V04	DL09	14156	55.0	0.36		< 4.33			
V04	DL09	14157	56.0	< 0.06		< 3.55			
V04	DL09	14165	57.0	0.45		< 3.29			
V04	DL09	14166	58.0	0.39		< 3.89			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCF (mg/kg)	Ni (mg/kg)
V04	DL09	14167	59.0	0.40 J		8.68			
V04	DL09	14168	60.0	0.41		5.70			
V04	DL09	14169	61.0	0.45		< 3.70			
V04	DL09	14170	62.0	0.42		< 2.72			
V04	DL09	14177	63.0	0.33		< 3.09			
V04	DL09	14179	64.0	0.261	1.53	1.38	0.0027 U	0.0027 U	5.3
V04	DL11	14337	14.0	0.48 J		< 5.14			
V04	DL11	14338	15.0	0.40 J		< 4.52			
V04	DL11	14339	16.0	0.27 J		4.83			
V04	DL11	14340	17.0	0.28		7.47			
V04	DL11	14341	18.0	< 0.07		< 5.27			
V04	DL11	14342	19.0	0.33 J		5.83 J			
V04	DL11	14343	20.0	< 0.06		< 3.84			
V04	DL11	14345	21.0	0.20		< 4.53			
V04	DL11	14355	22.0	0.24 J		< 4.14			
V04	DL11	14356	23.0	< 0.05		< 3.13			
V04	DL11	14357	24.0	0.22		< 4.06			
V04	DL11	14358	25.0	< 0.07		8.11 J			
V04	DL11	14359	26.0	0.21 J		3.65 J			
V04	DL11	14360	27.0	0.20		< 4.52			
V04	DL11	14365	28.0	0.25		< 3.65			
V04	DL11	14366	29.0	0.30		< 2.43			
V04	DL11	14378	30.0	0.20 J		< 2.90			
V04	DL11	14379	31.0	0.24		8.00			
V04	DL11	14380	32.0	0.42		< 4.91			
V04	DL11	14381	33.0	0.26 J		3.94 J			
V04	DL11	14382	34.0	0.27		< 4.74			
V04	DL11	14383	35.0	0.31		< 5.43			
V04	DL11	14396	36.0	0.20		< 3.34			
V04	DL11	14397	37.0	0.22 J		< 3.09			
V04	DL11	14398	38.0	0.12		9.50			
V04	DL11	14399	39.0	0.34 J		< 3.09			
V04	DL11	14400	40.0	0.28		< 3.11			
V04	DL11	14401	41.0	< 0.02		< 4.21			
V04	DL11	14416	42.0	0.23 J		< 5.09			
V04	DL11	14417	43.0	0.17 J		< 2.91			
V04	DL11	14419	44.0	0.29		< 3.53			
V04	DL11	14420	45.0	0.47 J		< 4.34			
V04	DL11	14422	46.0	0.27		< 4.20			
V04	DL11	14424	47.0	0.23		6.78			
V04	DL11	14425	48.0	0.37 J		< 3.85			
V04	DL11	14426	49.0	0.36 J		4.71 J			
V04	DL11	14427	50.0	0.51		< 3.88			
V04	DL11	14428	51.0	0.41		< 3.52			
V04	DL11	14457	52.0	0.38		< 3.51			
V04	DL11	14458	53.0	0.50		< 3.45			
V04	DL11	14459	54.0	0.43		< 3.99			
V04	DL11	14460	55.0	0.57		< 5.23			
V04	DL11	14461	56.0	0.66 J		< 3.91			
V04	DL11	14462	57.0	0.30 J		3.27 J			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCP (mg/kg)	Ni (mg/kg)
V04	DL11	14463	58.0	0.34		< 4.01			
V04	DL11	14465	59.0	< 0.06		< 3.50			
V04	DL11	14468	60.0	0.29 J		< 3.04			
V04	DL11	14469	61.0	0.43		< 1.46			
V04	DL11	14472	62.0	0.41		< 4.47			
V04	DL11	14473	63.0	0.21 J		8.29			
V04	DL11	14474	64.0	0.195	2.10	2.02	0.0026 U	0.0026 U	2.3 J
V04	DL12	14514	16.0	0.44		8.19 J			
V04	DL12	14515	17.0	0.35		< 4.75			
V04	DL12	14520	18.0	0.44		7.97			
V04	DL12	14521	19.0	0.23		6.56			
V04	DL12	14522	20.0	0.25		7.41			
V04	DL12	14523	21.0	0.24		10.92			
V04	DL12	14525	22.0	< 0.08		10.17			
V04	DL12	14526	23.0	0.17		12.34			
V04	DL12	14531	24.0	0.26		< 5.72			
V04	DL12	14532	25.0	0.17		4.62			
V04	DL12	14533	26.0	0.57		< 4.30			
V04	DL12	14534	27.0	0.23		< 3.42			
V04	DL12	14537	28.0	< 0.05		4.44			
V04	DL12	14538	29.0	0.31		< 3.79			
V04	DL12	14539	30.0	0.27		< 3.94			
V04	DL12	14540	31.0	< 0.02		3.17 J			
V04	DL12	14545	32.0	0.36		< 4.56			
V04	DL12	14546	33.0	0.29		< 3.32			
V04	DL12	14554	34.0	0.42		8.66			
V04	DL12	14555	35.0	0.30		7.06			
V04	DL12	14556	36.0	0.45		9.45			
V04	DL12	14557	37.0	0.19		< 3.71			
V04	DL12	14562	38.0	0.29		< 4.61			
V04	DL12	14563	39.0	0.36		< 3.10			
V04	DL12	14564	40.0	0.21		7.25 J			
V04	DL12	14565	41.0	0.22		< 3.91			
V04	DL12	14570	42.0	0.27		< 2.88			
V04	DL12	14571	43.0	0.19		6.26			
V04	DL12	14575	44.0	0.27		6.07			
V04	DL12	14576	45.0	0.23		< 3.99			
V04	DL12	14581	46.0	0.41		15.59			
V04	DL12	14582	47.0	0.29		< 3.33			
V04	DL12	14595	48.0	0.61		< 2.06			
V04	DL12	14596	49.0	< 0.05		< 3.10			
V04	DL12	14597	50.0	0.57		< 4.81			
V04	DL12	14598	51.0	0.52		7.69			
V04	DL12	14599	52.0	0.38		< 3.06			
V04	DL12	14600	53.0	0.51		4.17 J			
V04	DL12	14601	54.0	0.51		< 5.01			
V04	DL12	14602	55.0	0.42		< 1.33			
V04	DL12	14607	56.0	0.50		< 4.31			
V04	DL12	14608	57.0	0.29		3.68 J			
V04	DL12	14609	58.0	0.45		4.75 J			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	Tl-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
V04	DL12	14610	59.0	0.46		< 5.27			
V04	DL12	14611	60.0	0.22		< 3.15			
V04	DL12	14612	61.0	0.40		< 3.61			
V04	DL12	14614	62.0	0.46		3.93 J			
V04	DL12	14615	63.0	0.45		< 4.09			
V04	DL12	14616	64.0	0.257	2.46	2.51	0.0026 U	0.0026 U	1.8 J
V05	DL03	12784	20.0	0.58		4.96 J			
V05	DL03	12785	21.0	0.39		9.62			
V05	DL03	12786	22.0	0.54		15.64			
V05	DL03	12787	23.0	< 0.07		14.87			
V05	DL03	12791	24.0	0.38		11.26			
V05	DL03	12792	25.0	0.26		16.06			
V05	DL03	12804	26.0	0.22		16.87			
V05	DL03	12805	27.0	0.30		21.86			
V05	DL03	12815	28.0	0.20		21.52			
V05	DL03	12816	29.0	0.17		15.60			
V05	DL03	12817	30.0	< 0.08		18.00			
V05	DL03	12818	31.0	0.16		15.01			
V05	DL03	12823	32.0	0.22		23.94			
V05	DL03	12824	33.0	< 0.03		20.61			
V05	DL03	12826	34.0	0.34		48.12			
V05	DL03	12827	35.0	0.29		32.65			
V05	DL03	12829	36.0	0.30		26.09			
V05	DL03	12830	37.0	0.11 J		37.22			
V05	DL03	12839	38.0	0.42		45.47			
V05	DL03	12840	39.0	0.36 J		24.40			
V05	DL03	12847	40.0	0.31 J		27.68			
V05	DL03	12848	41.0	0.27		23.64			
V05	DL03	12849	42.0	< 0.07		19.42			
V05	DL03	12850	43.0	0.16		30.81			
V05	DL03	12852	44.0	< 0.08		32.70			
V05	DL03	12853	45.0	0.28		43.08			
V05	DL03	12854	46.0	0.34		27.34			
V05	DL03	12855	47.0	0.21		24.70			
V05	DL03	12856	48.0	0.42		20.07			
V05	DL03	12857	49.0	0.46		11.23			
V05	DL03	12859	50.0	0.53		19.66			
V05	DL03	12860	51.0	0.47		26.79			
V05	DL03	12861	52.0	0.45		23.62			
V05	DL03	12862	53.0	0.51		20.19			
V05	DL03	12868	54.0	0.45		19.12			
V05	DL03	12869	55.0	0.46		25.09			
V05	DL03	12874	56.0	0.59		27.40			
V05	DL03	12875	57.0	0.53		21.48			
V05	DL03	12876	58.0	0.46		21.73			
V05	DL03	12877	59.0	0.41		22.86			
V05	DL03	12881	60.0	0.51		18.88			
V05	DL03	12882	61.0	0.51		14.35			
V05	DL03	12893	62.0	0.51		21.92			
V05	DL03	12894	63.0	< 0.09		20.09			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V05	DL03	12902	64.0	0.152	11.3	11.6	0.0011 J	0.00072 J	0.81 J
V05	DL04	12967	21.0	0.33		9.39			
V05	DL04	12968	22.0	< 0.05		14.57			
V05	DL04	12969	23.0	0.31		24.82			
V05	DL04	12982	24.0	0.39		33.98			
V05	DL04	12983	25.0	< 0.09		23.12			
V05	DL04	12984	26.0	0.28		18.58			
V05	DL04	12985	27.0	< 0.05		26.65			
V05	DL04	12986	28.0	0.28		29.33			
V05	DL04	12987	29.0	0.19		22.17			
V05	DL04	12991	30.0	0.25 J		24.59			
V05	DL04	12992	31.0	0.28		24.52			
V05	DL04	12993	32.0	0.30		27.10			
V05	DL04	12994	33.0	< 0.05		17.79			
V05	DL04	12995	34.0	0.30 J		25.29			
V05	DL04	12996	35.0	< 0.04		16.61			
V05	DL04	12998	36.0	0.41		21.07			
V05	DL04	12999	37.0	0.30		17.25			
V05	DL04	13016	38.0	0.37		21.00 J			
V05	DL04	13017	39.0	0.52		22.43			
V05	DL04	13018	40.0	0.20		20.78 J			
V05	DL04	13019	41.0	0.35		32.43 J			
V05	DL04	13027	42.0	0.38		35.59 J			
V05	DL04	13028	43.0	0.28		16.52			
V05	DL04	13036	44.0	0.24		28.46			
V05	DL04	13037	45.0	0.34		24.83 J			
V05	DL04	13038	46.0	0.31		18.33			
V05	DL04	13039	47.0	0.28		23.32 J			
V05	DL04	13040	48.0	0.49		15.33			
V05	DL04	13043	49.0	0.29		18.57 J			
V05	DL04	13058	50.0	0.32		26.05 J			
V05	DL04	13059	51.0	0.49		27.69			
V05	DL04	13060	52.0	0.46		14.36			
V05	DL04	13061	53.0	0.45		13.03			
V05	DL04	13062	54.0	0.54		15.34			
V05	DL04	13063	55.0	0.43		13.26			
V05	DL04	13067	56.0	0.61		19.08 J			
V05	DL04	13068	57.0	0.33		16.42			
V05	DL04	13076	58.0	0.37		16.18			
V05	DL04	13077	59.0	0.44		24.64 J			
V05	DL04	13078	60.0	< 0.05		27.00			
V05	DL04	13080	61.0	0.43		16.11 J			
V05	DL04	13084	62.0	0.44		16.61			
V05	DL04	13085	63.0	0.47		17.88			
V05	DL04	13088	64.0	0.30	19.2	19.8	0.0026 U	0.0021 J	1.1 J
V05	DL05	13130	20.0	0.45		9.58			
V05	DL05	13131	21.0	0.51		< 5.87			
V05	DL05	13132	22.0	0.35		30.96			
V05	DL05	13133	23.0	0.26		13.35			
V05	DL05	13134	24.0	0.26		29.45			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V05	DL05	13148	25.0	0.51		15.61			
V05	DL05	13149	26.0	0.17		12.94			
V05	DL05	13151	27.0	0.24		30.11			
V05	DL05	13153	28.0	< 0.05		22.97			
V05	DL05	13155	29.0	0.23		18.73			
V05	DL05	13156	30.0	0.30 J		26.13			
V05	DL05	13166	31.0	0.25		22.20			
V05	DL05	13167	32.0	0.26		16.83			
V05	DL05	13168	33.0	0.24		15.18			
V05	DL05	13169	34.0	0.28		< 6.52			
V05	DL05	13170	35.0	0.34		17.27			
V05	DL05	13171	36.0	0.40		21.21			
V05	DL05	13180	37.0	< 0.09		27.92			
V05	DL05	13181	38.0	0.35		20.88			
V05	DL05	13182	39.0	0.40		26.32			
V05	DL05	13183	40.0	0.18		24.17			
V05	DL05	13185	41.0	0.24		20.54			
V05	DL05	13186	42.0	0.29		14.79			
V05	DL05	13201	43.0	0.25		21.63			
V05	DL05	13202	44.0	0.18		21.00			
V05	DL05	13203	45.0	0.32		41.89			
V05	DL05	13204	46.0	0.18		23.40			
V05	DL05	13205	47.0	0.33		37.30			
V05	DL05	13206	48.0	< 0.07		27.09			
V05	DL05	13209	49.0	0.39		30.54			
V05	DL05	13210	50.0	0.34		26.42			
V05	DL05	13211	51.0	0.45		21.63			
V05	DL05	13212	52.0	0.43		18.92			
V05	DL05	13226	53.0	0.42		23.63			
V05	DL05	13227	54.0	0.44		28.04			
V05	DL05	13228	55.0	0.53		25.52			
V05	DL05	13229	56.0	0.40		31.28			
V05	DL05	13233	57.0	0.43		23.08			
V05	DL05	13234	58.0	0.35		24.21			
V05	DL05	13237	59.0	0.58		29.95			
V05	DL05	13238	60.0	0.40		36.73			
V05	DL05	13239	61.0	0.44		24.51			
V05	DL05	13240	62.0	0.47		22.59			
V05	DL05	13241	63.0	0.35		23.32			
V05	DL05	13242	64.0	0.289	12.6	13.4	0.0026 U	0.0026 U	0.42 J
V06	DL16	15135	21.0	0.22		6.96			
V06	DL16	15136	22.0	0.29		15.38			
V06	DL16	15137	23.0	0.24		18.08			
V06	DL16	15138	24.0	< 0.07		< 5.04			
V06	DL16	15139	25.0	0.19		37.27			
V06	DL16	15140	26.0	0.25		29.96			
V06	DL16	15141	27.0	0.34		39.33			
V06	DL16	15142	28.0	< 0.06		40.84			
V06	DL16	15143	29.0	0.17		23.00			
V06	DL16	15144	30.0	0.27		24.76			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V06	DL16	15145	31.0	< 0.03		40.39			
V06	DL16	15146	32.0	0.24		17.89			
V06	DL16	15147	33.0	0.23		12.62			
V06	DL16	15148	34.0	0.41		27.53			
V06	DL16	15149	35.0	0.26		12.34			
V06	DL16	15150	36.0	0.28		9.82			
V06	DL16	15151	37.0	0.25		14.59			
V06	DL16	15152	38.0	< 0.04		83.77			
V06	DL16	15153	39.0	0.28		18.10			
V06	DL16	15154	40.0	0.34		17.69			
V06	DL16	15155	41.0	0.28		16.44			
V06	DL16	15156	42.0	< 0.05		13.50			
V06	DL16	15157	43.0	< 0.06		10.68			
V06	DL16	15158	44.0	0.24 J		13.32			
V06	DL16	15159	45.0	0.26		11.70			
V06	DL16	15160	46.0	0.48		18.29			
V06	DL16	15161	47.0	0.24		14.14			
V06	DL16	15162	48.0	0.45		30.82			
V06	DL16	15163	49.0	0.99		28.93			
V06	DL16	15164	50.0	0.53		39.16			
V06	DL16	15165	51.0	0.60		38.79			
V06	DL16	15166	52.0	0.55		44.26			
V06	DL16	15167	53.0	< 0.08		40.42			
V06	DL16	15169	54.0	0.43		39.33			
V06	DL16	15170	55.0	0.31		28.91			
V06	DL16	15171	56.0	0.45		30.57			
V06	DL16	15172	57.0	0.49		30.57			
V06	DL16	15173	58.0	0.88		42.09			
V06	DL16	15174	59.0	0.46		22.01			
V06	DL16	15175	60.0	0.49		18.58			
V06	DL16	15176	61.0	0.45		20.11			
V06	DL16	15177	62.0	0.47		25.91			
V06	DL16	15178	63.0	0.41		17.85			
V06	DL16	15179	64.0	0.195	10.4	10.4	0.0031 U	0.0031 U	3.7 J
V06	DL19	15333	21.0	0.34		28.68			
V06	DL19	15334	22.0	0.20 J		17.95			
V06	DL19	15335	23.0	0.30		33.24			
V06	DL19	15336	24.0	0.25		28.37			
V06	DL19	15340	25.0	< 0.08		47.35			
V06	DL19	15341	26.0	0.20		52.55			
V06	DL19	15342	27.0	0.29		50.12			
V06	DL19	15343	28.0	0.33		53.00			
V06	DL19	15344	29.0	0.36		77.37			
V06	DL19	15345	30.0	0.43		45.02			
V06	DL19	15346	31.0	0.31		73.47			
V06	DL19	15347	32.0	0.37		35.67			
V06	DL19	15348	33.0	0.92		45.61			
V06	DL19	15349	34.0	0.31		100.67			
V06	DL19	15350	35.0	0.29		67.09			
V06	DL19	15351	36.0	0.18		55.96			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V06	DL19	15352	37.0	0.29		59.34			
V06	DL19	15353	38.0	0.61		103.47			
V06	DL19	15355	39.0	0.53		104.39			
V06	DL19	15356	40.0	0.31		135.49			
V06	DL19	15367	41.0	0.27		169.91			
V06	DL19	15368	42.0	0.16		36.83			
V06	DL19	15369	43.0	0.26		52.90			
V06	DL19	15370	44.0	0.38		93.02			
V06	DL19	15371	45.0	0.39		174.90			
V06	DL19	15372	46.0	0.24		176.11			
V06	DL19	15373	47.0	0.35		87.92			
V06	DL19	15374	48.0	0.39		29.93			
V06	DL19	15379	49.0	0.34		54.10			
V06	DL19	15380	50.0	0.50		27.83			
V06	DL19	15381	51.0	0.32		23.13			
V06	DL19	15382	52.0	0.42		12.68			
V06	DL19	15385	53.0	0.47		39.61			
V06	DL19	15386	54.0	0.42		12.48			
V06	DL19	15387	55.0	0.42		29.73			
V06	DL19	15388	56.0	0.43		36.86			
V06	DL19	15389	57.0	0.45		58.11			
V06	DL19	15390	58.0	0.45		47.76			
V06	DL19	15391	59.0	0.54		52.81			
V06	DL19	15392	60.0	0.53		74.95			
V06	DL19	15393	61.0	0.50		106.07			
V06	DL19	15394	62.0	0.41		41.84			
V06	DL19	15395	63.0	0.36		49.33			
V06	DL19	15396	64.0	0.259	28.9	29.0	0.0026 U	0.0032	1.7 J
V06	DL20	15400	21.0	0.20		7.68			
V06	DL20	15401	22.0	< 0.05		13.17			
V06	DL20	15402	23.0	0.28		6.96			
V06	DL20	15403	24.0	0.16		< 3.62			
V06	DL20	15404	25.0	0.23		7.36			
V06	DL20	15405	26.0	0.18		10.99			
V06	DL20	15406	27.0	0.22		12.05			
V06	DL20	15407	28.0	0.27		25.32			
V06	DL20	15408	29.0	0.27		20.63			
V06	DL20	15409	30.0	0.23		13.38			
V06	DL20	15410	31.0	< 0.06		15.30			
V06	DL20	15411	32.0	< 0.04		13.37			
V06	DL20	15412	33.0	0.27		21.28			
V06	DL20	15413	34.0	0.26		17.62			
V06	DL20	15414	35.0	0.23		14.56			
V06	DL20	15415	36.0	0.25		16.03			
V06	DL20	15416	37.0	0.28		22.08			
V06	DL20	15417	38.0	0.23		23.78			
V06	DL20	15418	39.0	< 0.06		12.20			
V06	DL20	15419	40.0	0.23		16.38			
V06	DL20	15420	41.0	< 0.06		20.23			
V06	DL20	15421	42.0	0.21		15.99			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V06	DL20	15422	43.0	0.33		16.03			
V06	DL20	15423	44.0	0.19		22.27			
V06	DL20	15424	45.0	0.28		28.30			
V06	DL20	15425	46.0	0.34		23.58			
V06	DL20	15426	47.0	0.40		26.13			
V06	DL20	15427	48.0	0.70		53.72			
V06	DL20	15428	49.0	0.46		29.01			
V06	DL20	15429	50.0	0.33		39.97			
V06	DL20	15430	51.0	0.41		24.32			
V06	DL20	15431	52.0	0.59		27.54			
V06	DL20	15432	53.0	0.31		17.48			
V06	DL20	15433	54.0	0.54		18.80			
V06	DL20	15435	55.0	0.42		30.27			
V06	DL20	15434	56.0	0.47		17.71			
V06	DL20	15436	57.0	0.41		32.69			
V06	DL20	15437	58.0	0.53		23.97			
V06	DL20	15438	59.0	0.42		40.97			
V06	DL20	15439	60.0	0.50		48.45			
V06	DL20	15440	61.0	0.60		72.85			
V06	DL20	15441	62.0	0.55		68.16			
V06	DL20	15442	63.0	0.44		37.09			
V06	DL20	15443	64.0	0.108	21.1	21.7	0.0027 U	0.0027 UJ	2.4 J
V07	DL17	15182	20.0	0.19		3.86			
V07	DL17	15183	21.0	< 0.02		13.60			
V07	DL17	15184	22.0	0.14		5.41			
V07	DL17	15185	23.0	0.52		7.68			
V07	DL17	15186	24.0	< 0.04		4.72			
V07	DL17	15187	26.0	0.38		< 5.05			
V07	DL17	15188	27.0	0.35		5.34			
V07	DL17	15189	28.0	0.31		< 3.34			
V07	DL17	15190	29.0	0.37		< 2.62			
V07	DL17	15191	30.0	0.24		< 3.43			
V07	DL17	15192	31.0	0.31		< 4.96			
V07	DL17	15193	32.0	0.28		6.08 J			
V07	DL17	15194	33.0	0.51		< 4.91			
V07	DL17	15195	34.0	0.22		< 3.54			
V07	DL17	15196	35.0	0.33		5.30 J			
V07	DL17	15197	36.0	0.27		< 3.25			
V07	DL17	15198	37.0	0.29		< 4.91			
V07	DL17	15199	38.0	0.26		5.45 J			
V07	DL17	15200	39.0	0.38		< 4.21			
V07	DL17	15201	40.0	0.36		3.67			
V07	DL17	15202	41.0	< 0.02		4.32			
V07	DL17	15203	42.0	0.19		< 3.17			
V07	DL17	15204	43.0	0.25		3.55 J			
V07	DL17	15205	44.0	0.34		7.70			
V07	DL17	15208	45.0	0.27		< 4.29			
V07	DL17	15209	46.0	0.21		3.54			
V07	DL17	15206	47.0	< 0.11		4.50			
V07	DL17	15207	48.0	0.88		24.99			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell*	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V07	DL17	15210	49.0	0.69		12.94			
V07	DL17	15211	50.0	0.72		15.63			
V07	DL17	15212	51.0	0.85		26.23			
V07	DL17	15213	52.0	0.70		14.78			
V07	DL17	15214	53.0	0.68		18.06			
V07	DL17	15215	54.0	0.50		18.57			
V07	DL17	15216	55.0	0.46		15.74			
V07	DL17	15217	56.0	0.42		23.08			
V07	DL17	15218	57.0	0.53		33.21			
V07	DL17	15219	58.0	0.48		10.39			
V07	DL17	15220	59.0	0.35		14.16			
V07	DL17	15221	60.0	0.38		5.10 J			
V07	DL17	15222	61.0	0.44		10.27			
V07	DL17	15223	62.0	0.46		8.88			
V07	DL17	15224	63.0	0.42		11.01			
V07	DL17	15226	64.0	0.33	8.62	9.00	0.0026 U	0.0026 U	4.2 U
W03	DL01	15227	3.0	1.18		< 6.09			
W03	DL01	15228	4.0	0.74		7.36 J			
W03	DL01	15229	5.0	0.45		< 3.89			
W03	DL01	15230	6.0	0.45		< 3.69			
W03	DL01	15311	7.0	< 0.04		4.79 J			
W03	DL01	15312	8.0	0.31		< 3.13			
W03	DL01	15313	9.0	0.31		< 2.59			
W03	DL01	15319	10.0	0.239	0.335	0.217	0.0026 U	0.0026 U	4.6
W03	DL02	15231	3.0	0.89		< 4.36			
W03	DL02	15232	4.0	0.58		6.16 J			
W03	DL02	15233	5.0	0.40		< 3.04			
W03	DL02	15234	6.0	0.53		< 4.17			
W03	DL02	15314	7.0	0.72		8.87			
W03	DL02	15315	8.0	0.33		< 2.77			
W03	DL02	15316	9.0	0.24		< 3.25			
W03	DL02	15317	10.0	0.36		< 4.13			
W03	DL02	15318	11.0	0.253	0.40	0.42	0.0026 U	0.0026 U	10.1
W05	DL06	13276	12.0	0.44		< 5.76			
W05	DL06	13278	13.0	0.38 J		< 4.00			
W05	DL06	13279	14.0	0.47		< 3.98			
W05	DL06	13281	15.0	0.35		< 4.19			
W05	DL06	13282	16.0	0.37 J		8.75			
W05	DL06	13283	17.0	0.41		10.63			
W05	DL06	13300	18.0	0.25		8.66			
W05	DL06	13301	19.0	0.38		8.80			
W05	DL06	13302	20.0	0.38 J		17.13			
W05	DL06	13303	21.0	0.17 J		17.48			
W05	DL06	13304	22.0	0.19		7.91			
W05	DL06	13305	23.0	0.35		14.37			
W05	DL06	13307	24.0	0.39 J		17.22			
W05	DL06	13308	25.0	0.28		15.76			
W05	DL06	13309	26.0	0.22		12.43			
W05	DL06	13310	27.0	0.27		18.10			
W05	DL06	13319	28.0	0.18		8.87			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W05	DL06	13320	29.0	0.30 J		13.31			
W05	DL06	13321	30.0	0.29		15.10			
W05	DL06	13322	31.0	0.22		14.41			
W05	DL06	13324	32.0	0.05 UJ		23.23			
W05	DL06	13325	33.0	0.30 J		21.09			
W05	DL06	13326	34.0	0.22		16.64			
W05	DL06	13327	35.0	0.39		20.49			
W05	DL06	13334	36.0	0.32 J		32.21			
W05	DL06	13335	37.0	0.24		18.60			
W05	DL06	13345	38.0	0.35		19.07			
W05	DL06	13346	39.0	0.23		16.90			
W05	DL06	13347	40.0	0.58 J		24.63			
W05	DL06	13349	41.0	0.42		22.40			
W05	DL06	13356	42.0	0.25		19.80			
W05	DL06	13357	43.0	0.27		22.91			
W05	DL06	13363	44.0	0.32		20.40			
W05	DL06	13364	45.0	0.19		15.63			
W05	DL06	13365	46.0	0.28 J		14.67			
W05	DL06	13366	47.0	0.36		11.81			
W05	DL06	13373	48.0	0.12 UJ		14.56			
W05	DL06	13374	49.0	0.48		12.23			
W05	DL06	13375	50.0	0.40		19.47			
W05	DL06	13376	51.0	0.36		8.15			
W05	DL06	13378	52.0	0.47		15.09			
W05	DL06	13379	53.0	0.38		13.27			
W05	DL06	13383	54.0	0.52		8.56			
W05	DL06	13384	55.0	0.53 J		5.79			
W05	DL06	13393	56.0	0.53 J		11.95			
W05	DL06	13394	57.0	0.44		< 3.92			
W05	DL06	13398	58.0	0.48		< 6.23			
W05	DL06	13399	59.0	0.47 J		10.66			
W05	DL06	13406	60.0	0.36		< 4.50			
W05	DL06	13407	61.0	0.43		< 4.04			
W05	DL06	13408	62.0	0.37		< 4.98			
W05	DL06	13409	63.0	0.43		< 4.36			
W05	DL06	13410	64.0	0.225	2.73	2.74	0.0026 U	0.0026 U	0.38 J
W06	DL15	14950	20.0	0.18		3.43			
W06	DL15	14951	21.0	0.36		18.35			
W06	DL15	14952	22.0	0.31		20.19 J			
W06	DL15	14957	23.0	0.20		7.98			
W06	DL15	14958	24.0	0.28		11.23			
W06	DL15	14959	25.0	< 0.07		11.30 J			
W06	DL15	14960	26.0	< 0.02		30.22 J			
W06	DL15	14969	27.0	0.44		21.38			
W06	DL15	14971	28.0	0.26		16.15			
W06	DL15	14973	29.0	0.31		15.07 J			
W06	DL15	14974	30.0	0.16		14.62			
W06	DL15	14975	31.0	< 0.04		8.05			
W06	DL15	14976	32.0	0.35		6.94			
W06	DL15	14982	33.0	0.31		9.27 J			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
W06	DL15	14983	34.0	0.26		5.30			
W06	DL15	15007	35.0	0.27		4.03			
W06	DL15	15008	36.0	0.25		4.02 UJ			
W06	DL15	15009	37.0	0.28		3.73 UJ			
W06	DL15	15010	38.0	0.26		6.81			
W06	DL15	15011	39.0	0.34		4.49			
W06	DL15	15012	40.0	0.29		7.86			
W06	DL15	15013	41.0	0.37		< 4.15			
W06	DL15	15014	42.0	0.17		3.25 J			
W06	DL15	15015	43.0	0.26		4.50 UJ			
W06	DL15	15016	44.0	0.19		< 2.76			
W06	DL15	15017	45.0	0.23		5.54			
W06	DL15	15018	46.0	0.33		9.39			
W06	DL15	15025	47.0	0.25		5.53			
W06	DL15	15026	48.0	0.30		5.88			
W06	DL15	15027	49.0	0.32		< 4.38			
W06	DL15	15028	50.0	0.36		< 3.27			
W06	DL15	15029	51.0	0.23		< 2.64			
W06	DL15	15030	52.0	0.42		4.15 J			
W06	DL15	15032	53.0	0.36		< 4.03			
W06	DL15	15033	54.0	0.50		3.96 UJ			
W06	DL15	15036	55.0	0.24		7.66			
W06	DL15	15037	56.0	0.45		< 3.80			
W06	DL15	15038	57.0	0.52		4.31 UJ			
W06	DL15	15039	58.0	0.37		< 4.47			
W06	DL15	15056	59.0	0.56		< 3.42			
W06	DL15	15057	60.0	0.30		< 2.85			
W06	DL15	15058	61.0	0.26		< 3.92			
W06	DL15	15059	62.0	0.20		3.42			
W06	DL15	15060	63.0	0.38		4.78 J			
W06	DL15	15055	64.0	0.24	4.21 J	4.55 J	0.0026 U	0.0026 U	0.52 J
W06	DL18	15243	19.0	0.49		13.50			
W06	DL18	15244	20.0	0.20		3.71			
W06	DL18	15245	21.0	0.28		6.71			
W06	DL18	15246	22.0	0.23		10.48			
W06	DL18	15247	23.0	0.38		15.48			
W06	DL18	15248	24.0	0.21		13.62			
W06	DL18	15249	25.0	0.40		< 6.38			
W06	DL18	15250	26.0	< 0.04		13.52			
W06	DL18	15251	27.0	0.28		16.44			
W06	DL18	15252	28.0	0.28		23.90			
W06	DL18	15253	29.0	0.33		15.61			
W06	DL18	15254	30.0	0.19		11.12			
W06	DL18	15255	31.0	0.32		11.26			
W06	DL18	15256	32.0	0.52		7.61			
W06	DL18	15257	33.0	0.33		12.40			
W06	DL18	15258	34.0	0.33		9.62 J			
W06	DL18	15259	35.0	0.29		12.03			
W06	DL18	15260	36.0	0.27		15.09			
W06	DL18	15261	37.0	0.26		12.39			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W06	DL18	15262	38.0	0.25		15.32			
W06	DL18	15263	39.0	0.20		11.69			
W06	DL18	15264	40.0	0.28		17.29			
W06	DL18	15265	41.0	0.50		19.61			
W06	DL18	15266	42.0	0.25		21.03			
W06	DL18	15267	43.0	0.15		16.75			
W06	DL18	15268	44.0	0.29		21.36			
W06	DL18	15269	45.0	0.26		13.21			
W06	DL18	15270	46.0	0.39		37.41			
W06	DL18	15272	47.0	< 0.08		29.07			
W06	DL18	15273	48.0	0.59		32.96			
W06	DL18	15282	49.0	0.43		25.56			
W06	DL18	15283	50.0	0.47		27.98			
W06	DL18	15284	51.0	0.41		24.37			
W06	DL18	15285	52.0	0.55		20.55			
W06	DL18	15286	53.0	0.87		21.93			
W06	DL18	15287	54.0	0.55		27.30			
W06	DL18	15292	55.0	0.49		33.31			
W06	DL18	15293	56.0	0.31		31.57			
W06	DL18	15294	57.0	0.54		27.09			
W06	DL18	15295	58.0	0.59		38.92			
W06	DL18	15297	59.0	0.60		37.25			
W06	DL18	15298	60.0	< 0.07		46.19			
W06	DL18	15303	61.0	0.63		40.01			
W06	DL18	15304	62.0	0.74		48.57			
W06	DL18	15309	63.0	0.59		36.18			
W06	DL18	15310	64.0	0.274	20.9	20.7	0.0026 U	0.0026 U	2.1 J
W06	DL21	15446	19.0	< 0.08		7.57			
W06	DL21	15448	20.0	0.20		< 2.94			
W06	DL21	15447	21.0	0.23		< 4.87			
W06	DL21	15449	22.0	0.22		4.07 J			
W06	DL21	15450	23.0	0.26		3.12 J			
W06	DL21	15451	24.0	0.31		< 2.93			
W06	DL21	15452	25.0	0.25		< 2.67			
W06	DL21	15460	26.0	0.32		6.37 J			
W06	DL21	15461	27.0	0.20		2.57 J			
W06	DL21	15462	28.0	0.18		< 3.33			
W06	DL21	15463	29.0	0.25		7.39			
W06	DL21	15464	30.0	0.31		5.44 J			
W06	DL21	15465	31.0	0.27		< 3.23			
W06	DL21	15466	32.0	0.21		< 4.07			
W06	DL21	15467	33.0	0.21		< 2.82			
W06	DL21	15468	34.0	0.29		< 4.47			
W06	DL21	15469	35.0	0.28		< 3.51			
W06	DL21	15471	36.0	0.22		4.44 J			
W06	DL21	15472	37.0	0.32		< 4.24			
W06	DL21	15473	38.0	0.19		10.11			
W06	DL21	15474	39.0	0.19		< 3.22			
W06	DL21	15475	40.0	0.44		6.25 J			
W06	DL21	15476	41.0	0.33		6.66 J			

Cell 1-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W06	DL21	15477	42.0	0.23		< 4.80			
W06	DL21	15478	43.0	0.34		< 3.67			
W06	DL21	15479	44.0	0.20		< 3.22			
W06	DL21	15480	45.0	0.45		< 4.08			
W06	DL21	15481	46.0	0.67		< 4.43			
W06	DL21	15482	47.0	0.60		< 4.44			
W06	DL21	15483	48.0	0.51		< 5.02			
W06	DL21	15484	49.0	0.53		< 3.74			
W06	DL21	15486	50.0	0.38		4.28 J			
W06	DL21	15487	51.0	0.47		5.26 J			
W06	DL21	15488	52.0	0.28		< 4.17			
W06	DL21	15489	53.0	< 0.07		< 3.12			
W06	DL21	15490	54.0	0.44		< 3.58			
W06	DL21	15491	55.0	0.39		< 3.35			
W06	DL21	15495	56.0	0.48		< 4.78			
W06	DL21	15496	57.0	0.34		< 3.53			
W06	DL21	15497	58.0	0.49		< 1.70			
W06	DL21	15498	59.0	0.40		< 4.41			
W06	DL21	15499	60.0	0.41		4.86			
W06	DL21	15500	61.0	0.43		10.23			
W06	DL21	15504	62.0	0.50		10.32			
W06	DL21	15505	63.0	0.55		8.54			
W06	DL21	15507	64.0	0.235	4.94	4.81	0.0026 U	0.0026 UJ	0.56 J
W07	DL22	15527	18.0	0.32		6.49			
W07	DL22	15528	19.0	< 0.03		< 5.02			
W07	DL22	15529	20.0	0.25		< 3.22			
W07	DL22	15530	21.0	0.22		< 3.02			
W07	DL22	15531	22.0	0.25		4.92 J			
W07	DL22	15532	23.0	0.20		< 2.99			
W07	DL22	15533	24.0	0.24		< 3.34			
W07	DL22	15534	25.0	0.24		< 4.76			
W07	DL22	15535	26.0	0.24		< 2.61			
W07	DL22	15536	27.0	0.21		< 4.70			
W07	DL22	15537	28.0	< 0.05		< 2.95			
W07	DL22	15538	29.0	0.27		2.96 J			
W07	DL22	15539	30.0	0.19		4.01 J			
W07	DL22	15540	31.0	0.21		5.23 J			
W07	DL22	15541	32.0	0.35		3.75 J			
W07	DL22	15542	33.0	0.36		< 4.11			
W07	DL22	15543	34.0	0.24		< 3.69			
W07	DL22	15544	35.0	0.24		3.98 J			
W07	DL22	15545	36.0	0.25		6.96			
W07	DL22	15546	37.0	0.17		2.81 J			
W07	DL22	15547	38.0	0.21		< 3.19			
W07	DL22	15548	39.0	0.29		5.67 J			
W07	DL22	15549	40.0	< 0.04		3.20 J			
W07	DL22	15550	41.0	0.22		4.07 J			
W07	DL22	15551	42.0	0.24		< 2.02			
W07	DL22	15556	43.0	0.25		< 3.14			
W07	DL22	15557	44.0	0.30		< 3.94			

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W07	DL22	15559	45.0	0.50		< 4.73			
W07	DL22	15560	46.0	0.77		< 3.70			
W07	DL22	15562	47.0	0.56		< 4.27			
W07	DL22	15563	48.0	0.53		3.70 J			
W07	DL22	15569	49.0	0.53		< 3.79			
W07	DL22	15570	50.0	0.64		< 4.84			
W07	DL22	15571	51.0	0.50		< 4.53			
W07	DL22	15572	52.0	0.44		< 3.42			
W07	DL22	15577	53.0	0.42		< 4.09			
W07	DL22	15578	54.0	0.45		4.19 J			
W07	DL22	15581	55.0	0.54		< 4.74			
W07	DL22	15582	56.0	0.43		< 3.67			
W07	DL22	15585	57.0	0.48		5.23 J			
W07	DL22	15586	58.0	0.42		< 3.19			
W07	DL22	15588	59.0	0.59		< 2.54			
W07	DL22	15589	60.0	0.45		< 3.53			
W07	DL22	15592	61.0	0.29		6.25 J			
W07	DL22	15593	62.0	0.42		4.52 J			
W07	DL22	15594	63.0	0.44		< 2.79			
W07	DL22	15595	64.0	0.247	1.77	1.79	0.0026 U	0.0026 UJ	0.52 J

**Cell 1-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232	TCE - Trichloroethene
U-234 - Uranium-234	PCE - Tetrachloroethene
U-238 - Uranium-238	Ni - Nickel

Units:

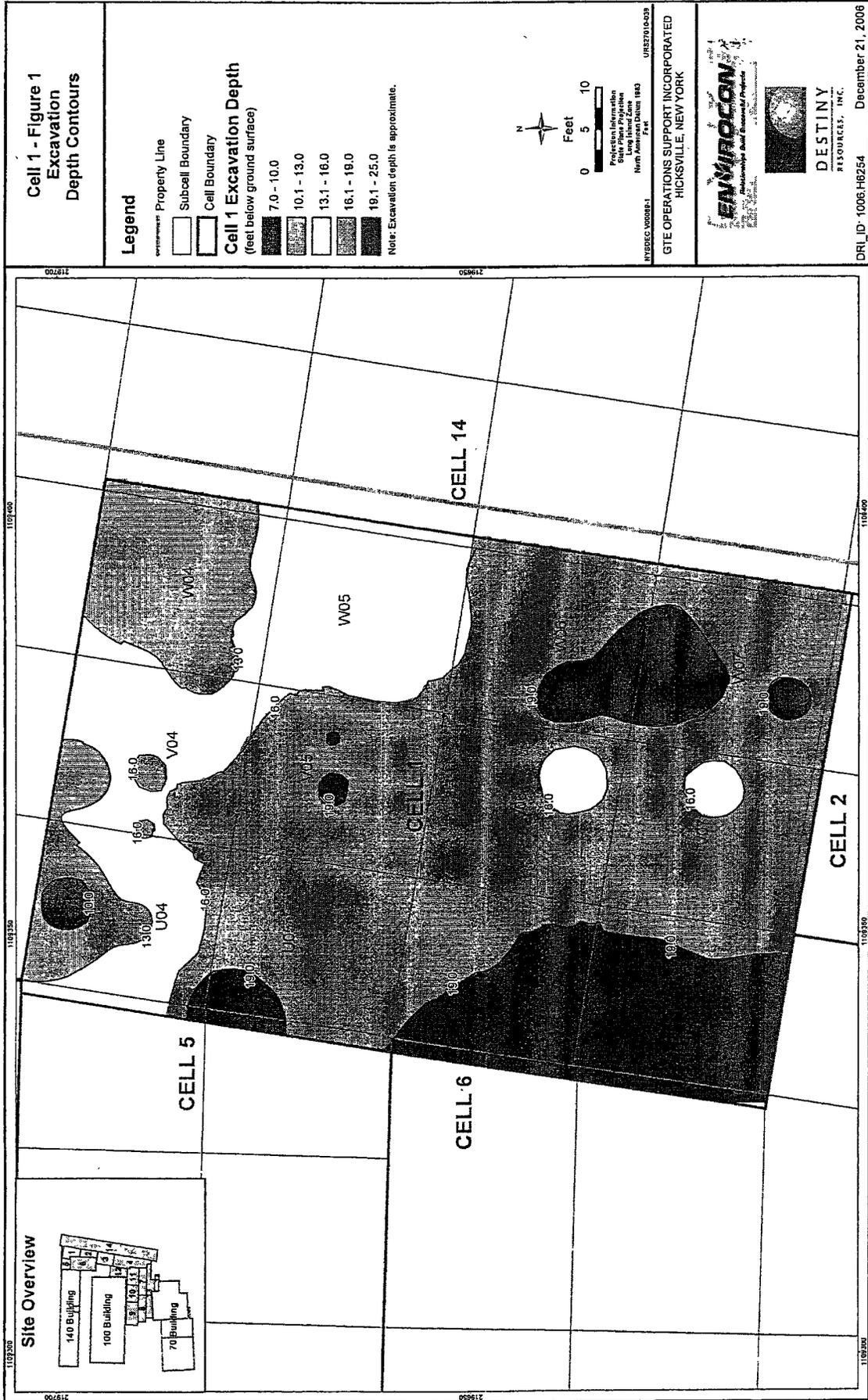
pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 1-Figure 6 for boring locations.
On-Site sample results are in plain font and include radionuclides (Th-232 and U-238) analyzed by the gamma spectroscopy system.
Off-Site sample results are in **bold font** and indicate that the analysis was performed by Severn Trent Laboratories, Inc.
Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.
Blank cell indicates analysis was not performed.
Boring initially called V06-DL18, subcell was corrected to W06.
The borings in subcells U03, V03, and W03 (originally in Cell 1North, later included in Cell 14), are presented in the Cell 1 report to agree with the sample barcodes, Cell 1N location designator.



**Cell 1 - Figure 1
Excavation
Depth Contours**

Legend

- Property Line
- Subcell Boundary
- Cell Boundary

Cell 1 Excavation Depth

(feet below ground surface)

- 7.0 - 10.0
- 10.1 - 13.0
- 13.1 - 16.0
- 16.1 - 19.0
- 19.1 - 25.0

Note: Excavation depth is approximate.



Feet
0 5 10

Scale: 1 inch = 100 feet
Long Island Zone
North American Datum 1983

NYSDDEC 300086-1 URS270 0338

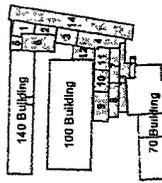
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DESTINY
RESOURCES, INC.

DRI_ID-1006.H6254 December 21, 2006

Site Overview



1107300

1107350

1107400

219700

219850

219850

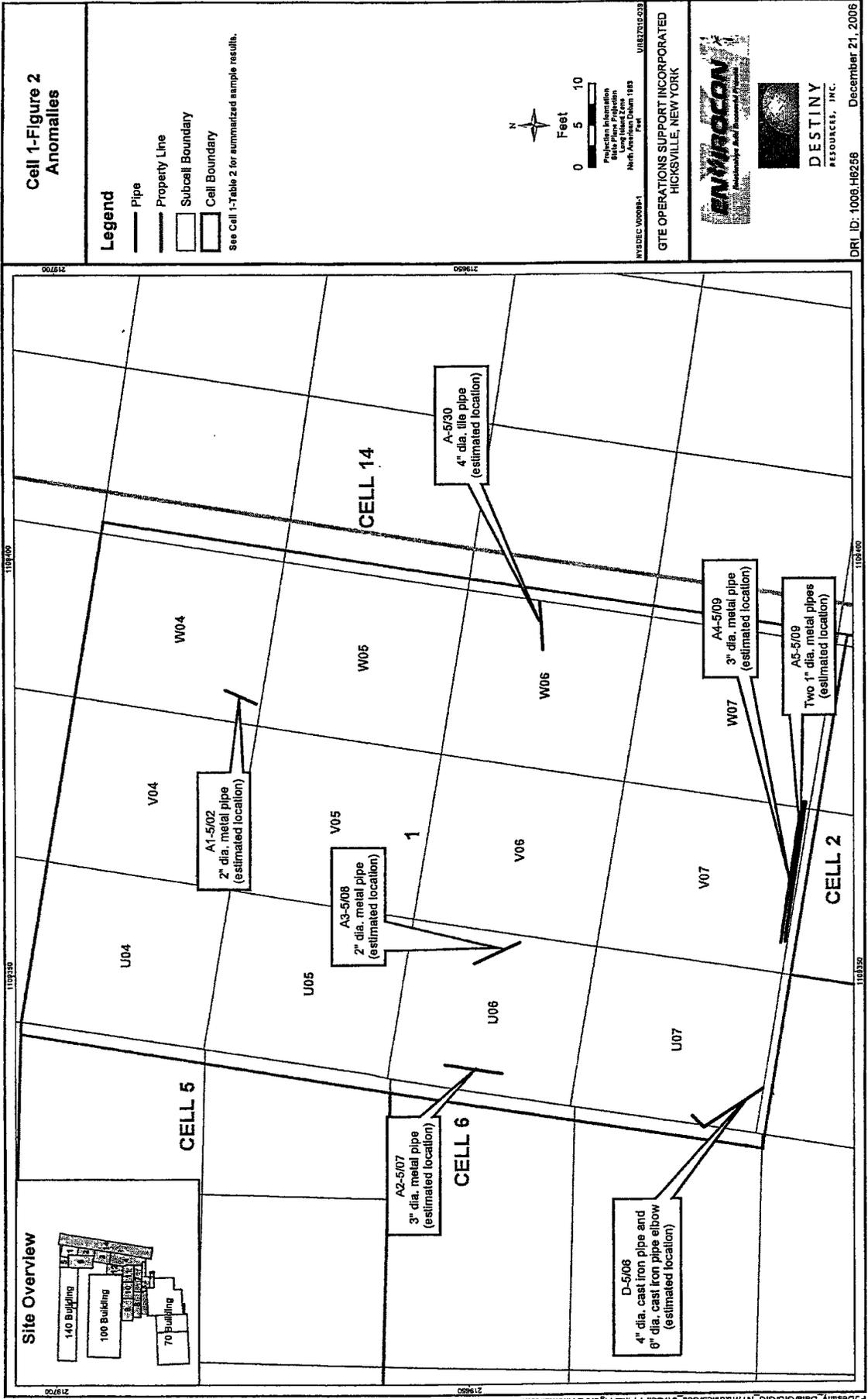
219700

1107300

1107350

1107400

P:\Destiny Data\GIS\GIS NY\mxd\files\Cell_01\Cell_1_Final_Figure_1_Excavation_Contour.mxd



DR1 ID: 1006.H6256 December 21, 2006



NYSDC V0008-1
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

Cell 1-Figure 3 Post-Excavation Gamma Radiation Walkover Survey Results

Legend

- Property Line
- ▭ Subcell Boundary
- ▭ Cell Boundary
- Lower Population - 79% of data points (0-4489 cpm)
- Middle Population - 16% of data points (4490-4809 cpm)
- Upper Population - 5% of data points (4810-5473 cpm)



Feet
0 5 10

Projection Information
Base Plane Projection
North American Datum 1983
Units: Feet

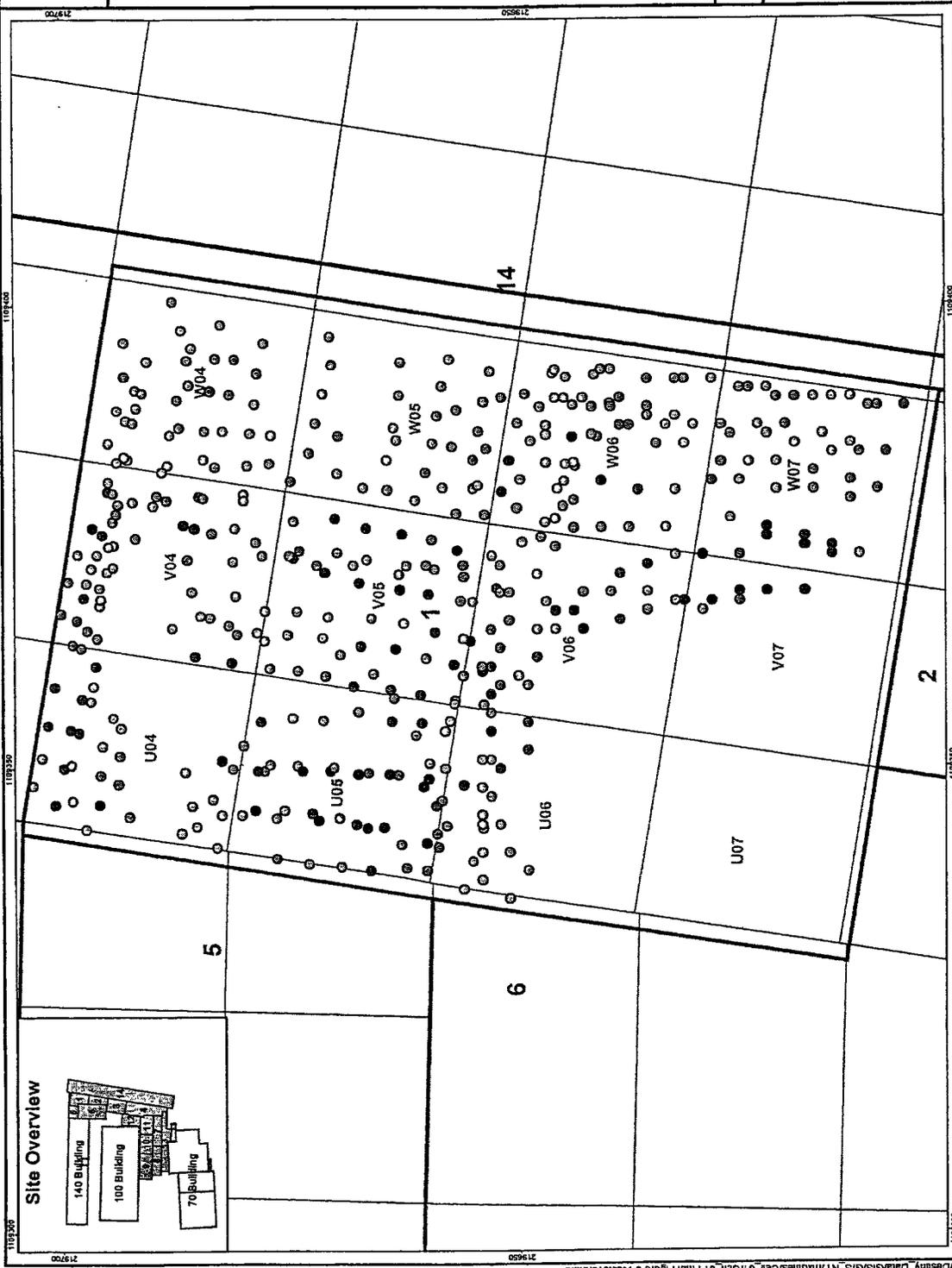
NYSED EG V0028-1

UNR27010-039

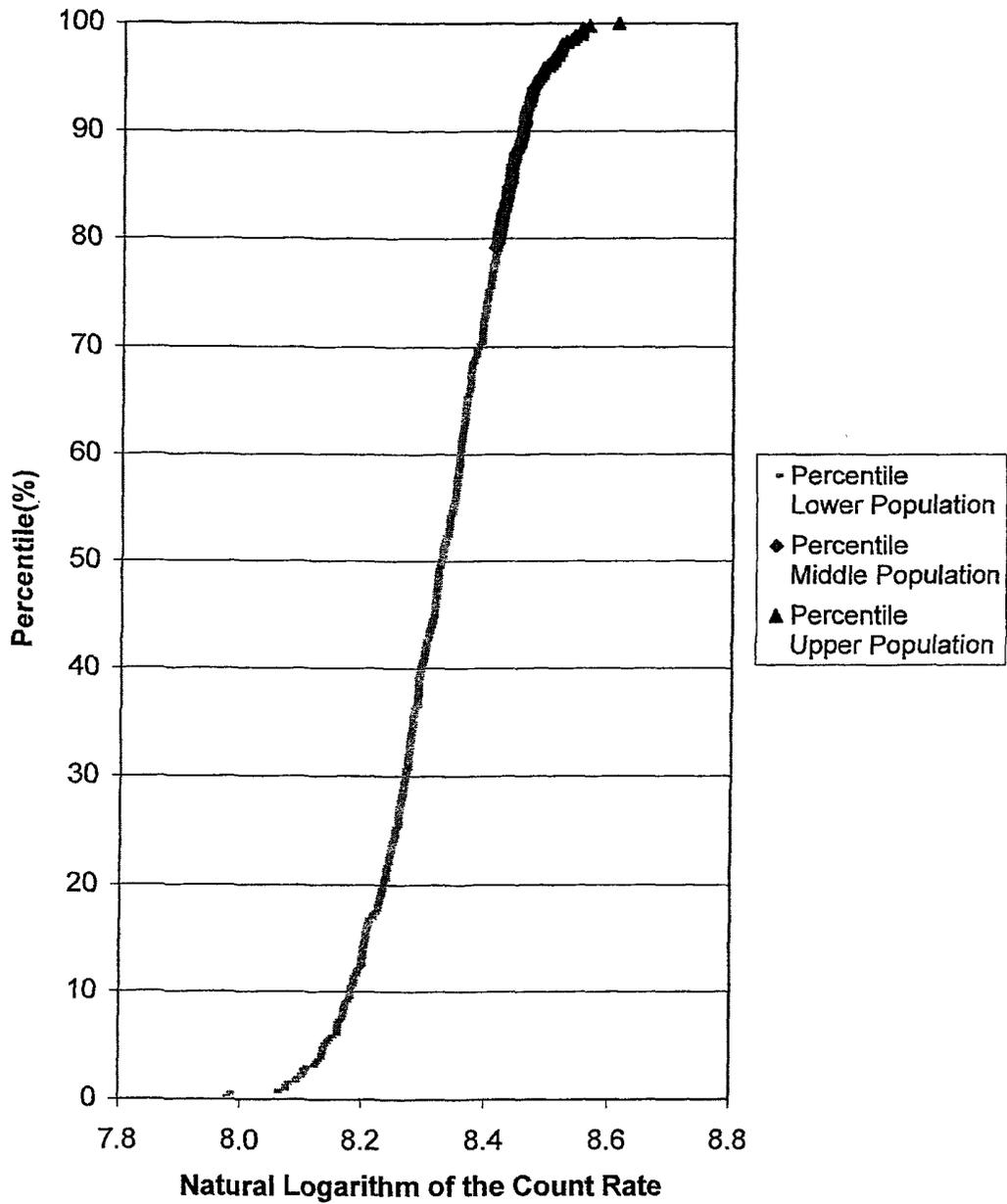
GTE OPERATIONS SUPPORT INCORPORATED
NICKSVILLE, NEW YORK




DRI_ID: 1006.H6255 December 21, 2006



Cell 1-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



Cell 1-Figure 5 Verification Floor Sample Locations and Results

- Legend**
- Sample Locations
 - Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

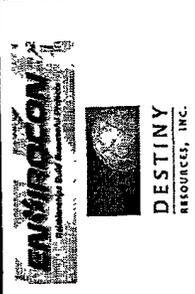
Label Key
[Date]
Sample Type [Sample ID] (Depth)
Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

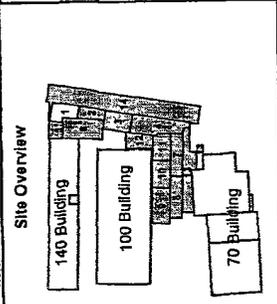
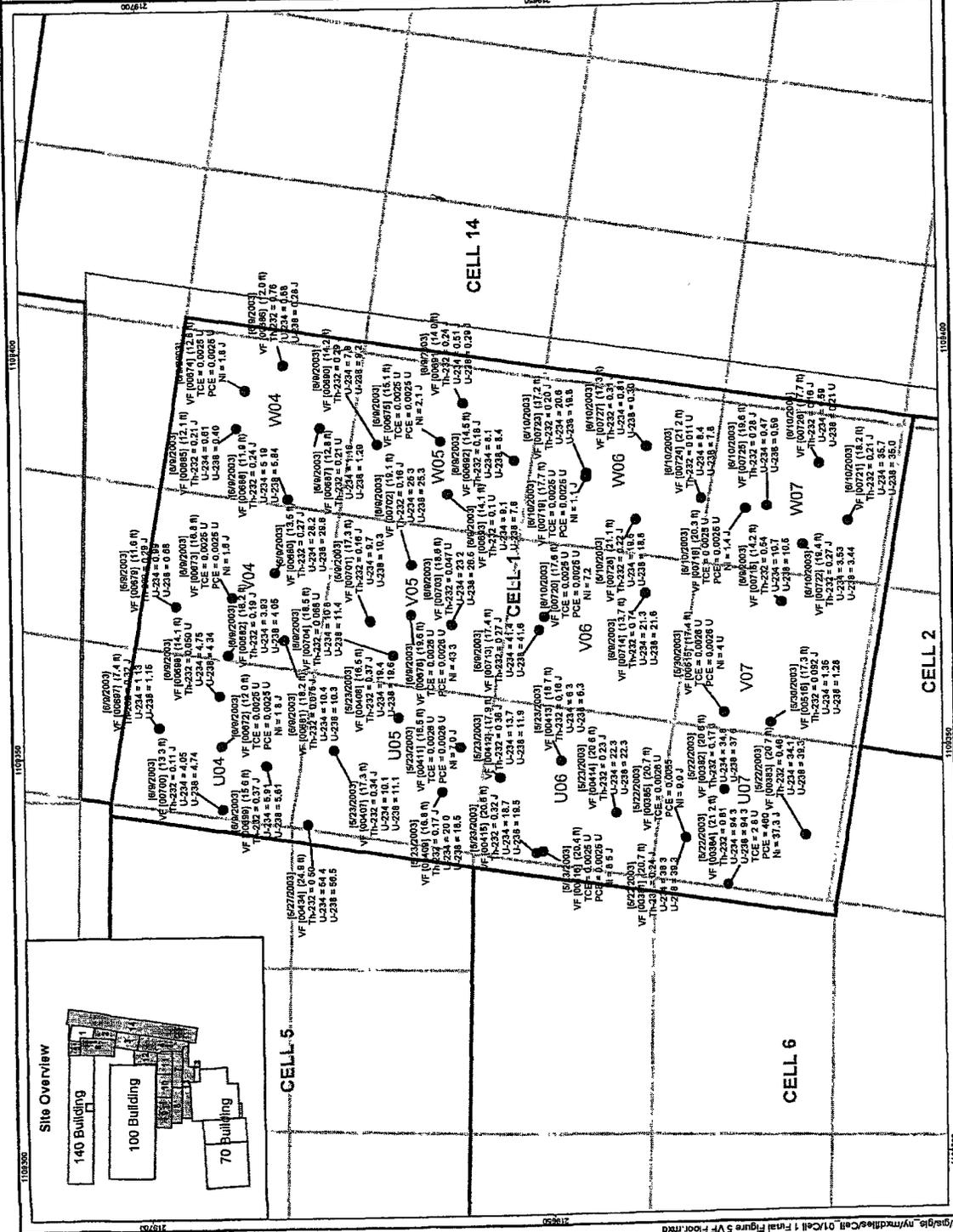
See Cell 1-Table 3 for summarized sample results.

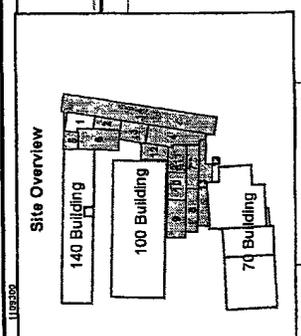
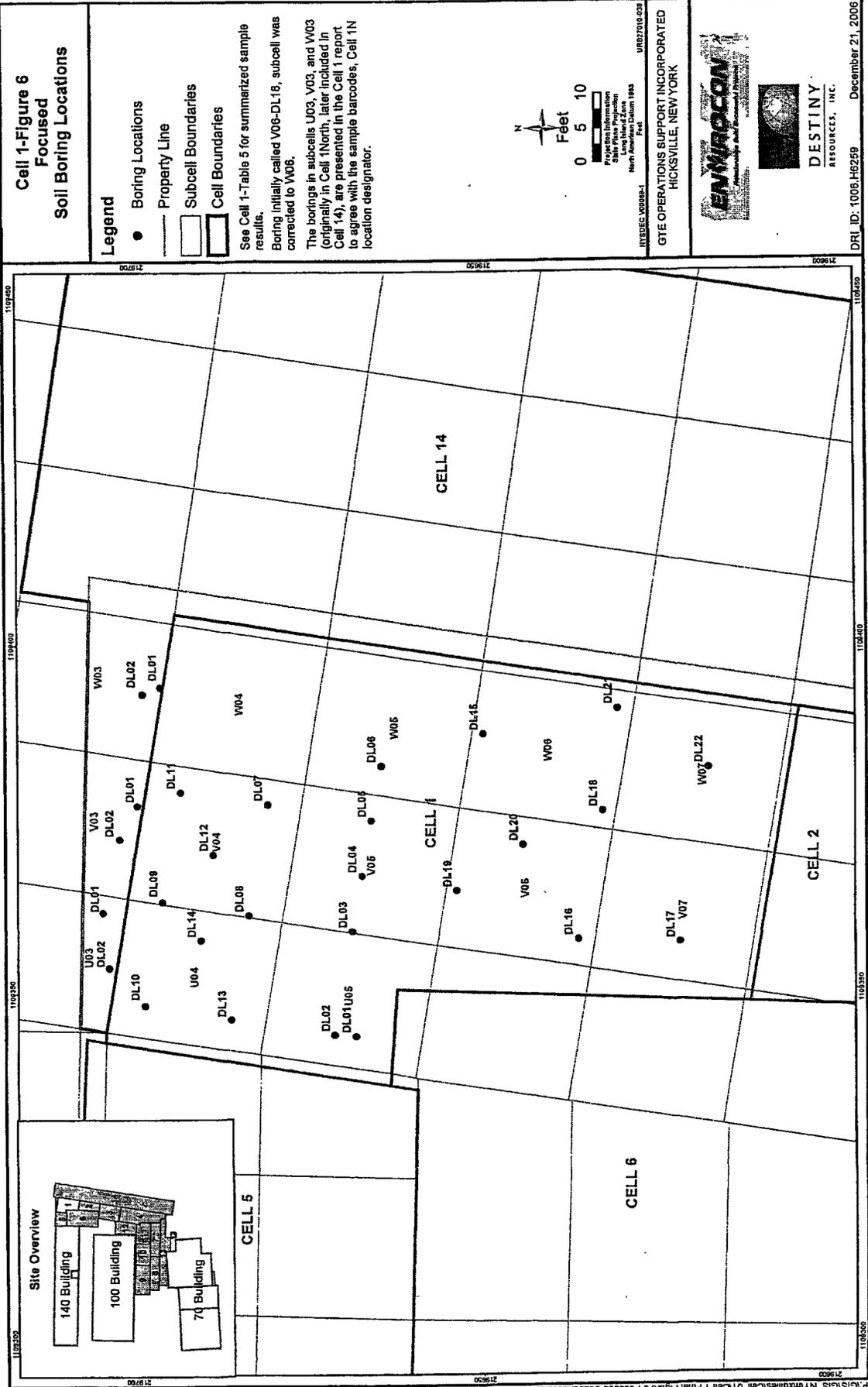


UNBSE0.W0088-1
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DR1_ID: 1006.H6266 December 21, 2006





GIS\GIS\NY\mxd\Cell 01\Cell 1 Final Figure 6 Focused Subsurface.mxd

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
Bureau of Hazardous Waste and Radiation Management
Radiation Section, Eighth Floor
625 Broadway, Albany, New York 12233-7255
Phone: (518) 402-8579 • FAX: (518) 402-8646
Website: www.dec.state.ny.us



June 13, 2003

Ms. Jean M. Agostinelli
Vice President and Controller
GTE Operations Support Incorporated
600 Hidden Ridge Drive (HQE03E75)
Irving, Texas 75038

Dear Ms. Agostinelli:

Re: Former Sylvania Electric Products Incorporated Facility
Site # V-0089-1 Index # W1-0903-01-12

This responds to your June 11, 2003 letter transmitting analytical results from the excavation of cell 1 on the Former Sylvania Electric Products Site, which is being remediated by GTE Operations Support Incorporated (GTEOSI). Your letter addressed only the radiological contaminants at the site, and our response applies only to the radiological aspects of the remediation.

Enclosed with your letter were data from confirmatory samples collected in each of the twelve subcells in cell 1. Four samples were collected in each subcell, with the exception of subcells V06 and V07, where only two samples were obtained in each subcell. Your letter explained that clean backfill from subcell U07 sloughed into subcells V06 and V07 after those two areas had been excavated, but before all four confirmatory samples could be collected. You also enclosed waste characterization data for the materials removed from V06 and V07, and verification sample results from U05, U06, and U07 (verification sample results for the other nine subcells are not yet available). You have requested our concurrence to backfill the cell at this point.

An environmental radiation specialist from DEC's Radiation Section has observed operations on the site, inspected the excavation, performed radiological surveys in

Attachment A
Page 1 of 2

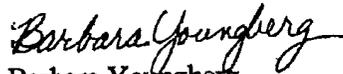
Ms. Agostinelli
June 13, 2003

Page 2

several subcells, and reviewed the available data with GTEOSI's staff and contractors. Based on his observations and the information presented in your letter, we concur that no further excavation or sampling is required in subcells V06 and V07 (from a radiological perspective), and we expect the upcoming verification sample results to support a conclusion that the radiological cleanup criteria have been met in cell 1. Therefore, DEC's Radiation Section concurs with your proposal to backfill cell 1.

If you have any questions, please call me.

Sincerely,



Barbara Youngberg
Chief, Radiation Section
Bureau of Hazardous Waste & Radiation Mgt.

Attachment A
Page 2 of 2



"Robert Stewart"
<rrstewar@gw.dec.state.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc:
Subject: Borrow Soils Characterization Surveys and Sampling, Sylvania

08/13/2003 01:28 PM

Jean,

I have read the Borrow Soils Characterizations Surveys and Sampling dated August 7, 2003. Based on this report, the soils that were evaluated are suitable for use as backfill.

Bob Stewart
NYSDEC - Region 1

MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, the originally configured Cell 1, passed the MARSSIM¹ Sign Test and the area is considered releasable. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of the originally configured Cell 1 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 44 floor VF samples collected and analyzed for radiological contaminants from subcells U04 to U07, V04 to V07, and W04 to W07 for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 44 samples are presented in the table on page 3 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this attachment were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 1 (Attachment page 5), a minimum of 22 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 44 soil sample analyses.

Beginning on page 4 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 5 and 6 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 6) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on page 3 of this Attachment.

¹ NUREG-1575, *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)*, August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

The third report is on pages 7 through 11 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on page 3. On the first page of this report (Attachment page 7) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 10) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.73. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1
Cell 1 VF Floor Soil Sample Results Used for MARSSIM Evaluation
Severn Trent Laboratory, Inc.

Sample ID No	H-232 (pCi/g)	H-234 (pCi/g)	H-238 (pCi/g)
00697	0.32 J	1.13	1.15
00698	0.050 U	4.75	4.34
00699	0.37 J	5.91	5.61
00700	0.11 J	4.05	4.74
00407	0.34 J	10.1	11.1
00408	0.37 J	19.4	19.6
00409	0.17 J	20.0	18.5
00434	0.50	54.4	56.5
00412	0.36 J	13.7	11.9
00413	0.16 J	6.3	6.3
00414	0.23 J	22.3	22.3
00415	0.32 J	18.7	19.5
00381	0.24 J	38.3	39.3
00382	0.17 J	34.8	37.6
00383	0.46	34.1	39.3
00384	0.81	94.3	94.3
00679	0.29 J	0.99	0.68
00680	0.27 J	28.2	29.6
00681	0.075 J	10.4	10.3
00682	0.19 J	3.93	4.05
00701	0.16 J	9.7	10.3
00702	0.16 J	25.3	25.3
00703	0.047 U	23.2	26.5
00704	0.068 U	10.8	11.4
00713	0.27 J	41.4	41.6
00714	0.74	21.3	21.6
00715	0.54	10.7	10.5
00516	0.092 J	1.35	1.28
00685	0.21 J	0.61	0.40
00686	0.76	0.58	0.28 J
00687	0.21 U	1.16	1.29
00688	0.24 J	5.19	5.84
00690	0.29 J	7.8	9.2
00691	0.24 J	0.51 J	0.29 J
00692	0.18 J	8.1	8.4
00693	0.1 U	9.1	7.8
00723	0.20 J	20.6	19.8
00727	0.31 J	0.81	0.30 J
00724	0.011 U	8.4	7.8
00728	0.22 J	19.5	18.8
00725	0.28 J	0.47	0.59
00726	0.16 J	0.59	0.21 U
00721	0.21 J	35.7	35.0
00722	0.27 J	3.53	3.44

Notes:

Cell area = 528 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as nondetect.

J - Validation qualifier used to indicate that the associated value is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

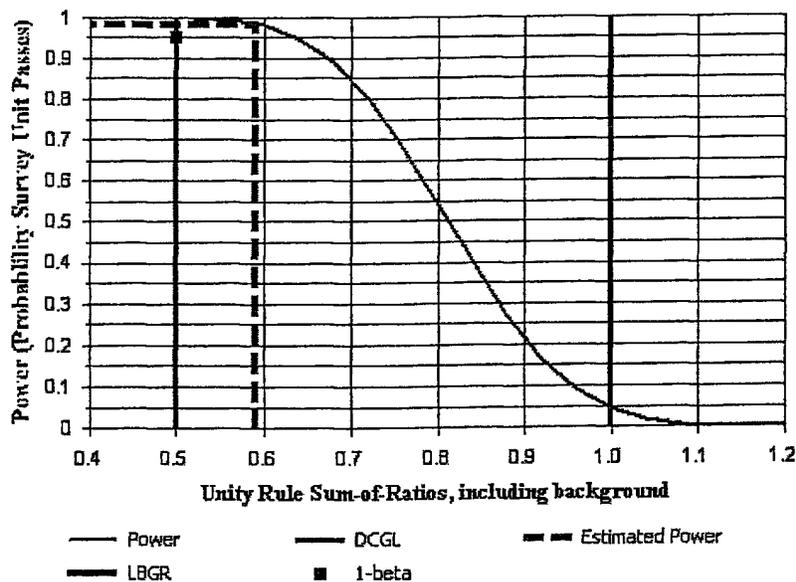


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Original Cell 1 with STL Data		
Comments:			
Area (m ²):	528	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.4
DCGL (SOR):	1	Sample Size (N):	22
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.59
Alpha:	0.050	Estimated Power:	0.98
Beta:	0.050	EMC Sample Size (N):	22
Scanning Instrumentation:	3" x 3" collimated NaI		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.2 \pm 0.1	N/A
U-234	16 \pm 18	N/A
U-238	10 \pm 9	N/A

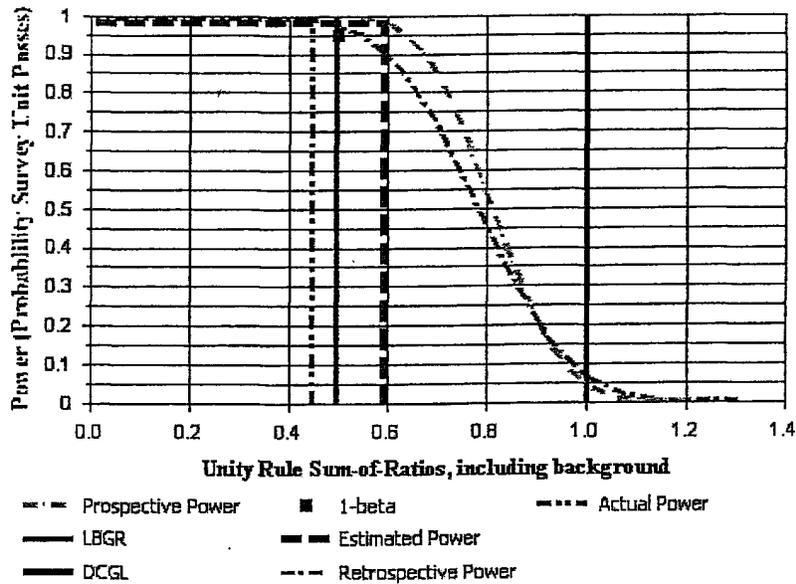


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Original Cell 1 with STL Data
Report Number: 1
Survey Unit Samples: 44
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
00697	S	0.32	1.13	1.15
00698	S	0.05	4.75	4.34
00699	S	0.37	5.91	5.61
00700	S	0.11	4.05	4.74
00407	S	0.34	10.1	11.1
00408	S	0.37	19.4	19.6
00409	S	0.17	20	18.5
00434	S	0.5	54.4	56.5
00412	S	0.36	13.7	11.9
00413	S	0.16	6.3	6.3
00414	S	0.23	22.3	22.3
00415	S	0.32	18.7	19.5
00381	S	0.24	38.3	39.3
00382	S	0.17	34.8	37.6
00383	S	0.46	34.1	39.3
00384	S	0.81	94.3	94.3
00679	S	0.29	0.99	0.68
00680	S	0.27	28.2	29.6
00681	S	0.08	10.4	10.3
00682	S	0.19	3.93	4.05
00701	S	0.16	9.7	10.3
00702	S	0.16	25.3	25.3
00703	S	0.05	23.2	26.5
00704	S	0.07	10.8	11.4
00713	S	0.27	41.4	41.6
00714	S	0.74	21.3	21.6
00715	S	0.54	10.7	10.5
00516	S	0.09	1.35	1.28
00685	S	0.21	0.61	0.4
00686	S	0.76	0.58	0.28
00687	S	0.21	1.16	1.29
00688	S	0.24	5.19	5.84
00690	S	0.29	7.8	9.2
00691	S	0.24	0.51	0.29
00692	S	0.18	8.1	8.4
00693	S	0.1	9.1	7.8
00723	S	0.2	20.6	19.8
00727	S	0.31	0.81	0.3
00724	S	0.01	8.4	7.8
00728	S	0.22	19.5	18.8
00725	S	0.28	0.47	0.59
00726	S	0.16	0.59	0.21
00721	S	0.21	35.7	35
00722	S	0.27	3.53	3.44



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
00697	S	0.16
00698	S	0.2
00699	S	0.36
00700	S	0.22
00407	S	0.55
00408	S	0.91
00409	S	0.83
00434	S	2.4
00412	S	0.64
00413	S	0.31
00414	S	0.97
00415	S	0.88
00381	S	1.64
00382	S	1.51
00383	S	1.63
00384	S	4.06
00679	S	0.14
00680	S	1.25
00681	S	0.44
00682	S	0.23
00701	S	0.46
00702	S	1.07
00703	S	1.01
00704	S	0.47
00713	S	1.76
00714	S	1.12
00715	S	0.62
00516	S	0.09
00685	S	0.1
00686	S	0.29
00687	S	0.12
00688	S	0.31
00690	S	0.44
00691	S	0.1
00692	S	0.39
00693	S	0.37
00723	S	0.88
00727	S	0.13
00724	S	0.33
00728	S	0.84
00725	S	0.12
00726	S	0.07
00721	S	1.49
00722	S	0.24



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	44	N/A	N=22
Mean (SOR)	0.73	N/A	0.59
Median (SOR)	0.45	N/A	N/A
Std Dev (SOR)	0.75	N/A	0.4
High Value (SOR)	4.06	N/A	N/A
Low Value (SOR)	0.07	N/A	N/A

Statistical Test Summary

S+: 33
 Critical Value: 27
 Result: Pass

Data	DCGLw - Data	Sign
0.16	0.84	+
0.2	0.80	+
0.36	0.64	+
0.22	0.78	+
0.55	0.45	+
0.91	0.09	+
0.83	0.17	+
2.4	-1.40	-
0.64	0.36	+
0.31	0.69	+
0.97	0.03	+
0.88	0.12	+
1.64	-0.64	-
1.51	-0.51	-
1.63	-0.63	-
4.06	-3.06	-
0.14	0.86	+
1.25	-0.25	-
0.44	0.56	+
0.23	0.77	+
0.46	0.54	+
1.07	-0.07	-
1.01	-0.01	-
0.47	0.53	+
1.76	-0.76	-
1.12	-0.12	-
0.62	0.38	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.09	0.91	+
0.1	0.90	+
0.29	0.71	+
0.12	0.88	+
0.31	0.69	+
0.44	0.56	+
0.1	0.90	+
0.39	0.61	+
0.37	0.63	+
0.88	0.12	+
0.13	0.87	+
0.33	0.67	+
0.84	0.16	+
0.12	0.88	+
0.07	0.93	+
1.49	-0.49	-
0.24	0.76	+

Cell 2 Status Report

INTRODUCTION

Cell 2 is comprised of subcells V08 to V11 and W08 to W11 and is located on the southeast side of the 140 Property and the northeast side of the 100 Property (Cell 2-Figure 1 and Figure 6 of Volume 1). Excavation of Cell 2 began on June 16, 2003 and was completed on August 12, 2003. Verbal approval to backfill Cell 2 was received from NYSDEC representatives on August 25, 2003 and documented in an e-mail on August 25, 2003 (Cell 2-Attachment A). A formal request to backfill Cell 2 was submitted in a report to NYSDEC titled *Cell 2 – Attainment of Radiological and Chemical Clean-up Levels* dated September 25, 2003. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 2 was backfilled beginning August 26, 2003 and was completed on September 15, 2003. The soils used for backfill came from four different sources. Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at each of the backfill sources. Survey and sample results were submitted to NYSDEC. Below is the designation for each backfill source and the date the survey and sample results were submitted to NYSDEC.

Location	Date of Submittal
Route 109	September 23, 2003
111 Pit South	October 17, 2003
J. D. Posillico Stockpile 2	October 17, 2003
Commack Stockpile	October 17, 2003

Approval to use these soils for backfill, with the exception of the Commack Stockpile, was granted from NYSDEC in an e-mail dated October 8, 2003 and a letter dated October 27, 2003 (Cell 2-Attachment B). NYSDEC recommended the Commack Stockpile not be used for backfill due to the chromium concentration detected in one sample. Additional sampling confirmed that the one elevated chromium concentration was an anomaly. Approximately 500 cubic yards of soil from the Commack Stockpile had been placed in Cell 2 prior to receipt of the NYSDEC letter. The use of the Commack Stockpile ceased immediately thereafter.

RECONFIGURATION OF CELLS 2 AND 6

Cell 2 was originally configured to include subcells U08 to U11 (Figure 5 of Volume I). During the excavation of Cell 2, it was determined that subcells U08 to U11 would have to be excavated to depths deeper than the maximum engineered excavation depths for Cell 2. Therefore, Cell 2 was reconfigured such that subcells U08 to U11 were incorporated into Cell 6 (Figure 6 of Volume I). The maximum excavation depth for Cell 6 was subsequently engineered to allow for further excavation in subcells U08 to U11 so as to attain the cleanup levels. Unless otherwise noted, references to Cell 2 in this cell status report are to the reconfigured Cell 2, i.e., subcells V08 to V11 and W08 to W11.

DEPTHS OF EXCAVATION

Cell 2 was excavated to depths ranging from 14 to 29 ft bgs. The excavation depths for each subcell are presented in Cell 2-Table 1 and are shown on Cell 2-Figure 1. (See Volume I, Section 6.2.4 for a description of how the excavation depths are determined.) A total of 17,331,262 pounds of soil and debris (799 Lift Liners™) were removed from Cell 2 and shipped to Envirocare for disposal. These quantities include soil removed from subcells U08 to U11 prior to reconfiguration.

ANOMALIES

During excavation of Cell 2, various anomalies were encountered. The anomalies were primarily pieces of pipe, concrete from drywells and leaching pools, and a UST as discussed below. A list of Cell 2 anomalies along with analytical results from anomaly samples is provided in Cell 2-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 2-Figure 2. The 6,000-gallon UST that was unearthed in subcells V10 and W10 is discussed in the *Tank Report, Cell 2, 140 Cantiague Rock Road, Hicksville, NY* issued to NYSDEC on February 16, 2004. All of the other anomalies encountered during the excavation activities in Cell 2 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 2, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 2- Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 2-Figure 4 depicts a CFD plot of the 931 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 2-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in MARSSIM. Details of the MARSSIM evaluation are provided in Cell 2-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Volume I, Sections 7.4, 7.5 and 7.6 for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

the Site ABCD Soil Sampling Protocol (Figure 10 of Volume I) with the exception of subcell V08. In subcell V08, only the sample in the B location was a standard surface soil sample. Five other samples were collected using 5-foot deep borings. For radiological purposes, the upper 2.5 ft of each boring was considered to be a surface soil VF sample although it was identified as an EX sample. The lower 2.5 ft of each boring was used for informational purposes during the excavation. These five borings were collected from the A and C locations, the center of the subcell, and the northwest and southwest edge of the subcell (Cell 2-Figure 5). For chemical analysis purposes, one VF sample was collected from each subcell. With the exception of V08, the sample was collected based on the highest PID reading in each subcell. For subcell V08, the chemical sample was collected from the B location and additional samples were collected from borings as described above.

In addition to the floor samples described above, an additional 41 VF samples were collected from the walls or at the joint of a wall and floor created within the cell due to the excavation to different depths within the cell (Cell 2-Figure 6).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the floor VF samples are provided in Cell 2-Table 3 and are shown on Cell 2-Figure 5. Cell 2-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of floor and wall VF samples. The radiological, PCE, TCE, and nickel results for STL analyses of the wall VF samples are provided in Cell 2-Table 5 and are shown on Cell 2-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, the reconfigured Cell 2, passed this evaluation (Cell 2-Attachment C). See Volume I, Section 8.0 for additional details on the MARSSIM protocol.

CONCLUSION

Based on verification sample STL analytical results, the radiological and chemical Site cleanup levels were attained for the reconfigured Cell 2.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 2-Table 1	Subcell Excavation Depths
Cell 2-Table 2:	Anomaly Sample Results
Cell 2-Table 3:	Summary of Verification Floor Sample Results, Severn Trent Laboratories, Inc.
Cell 2-Table 4:	Maximum Verification Floor and Wall Sample Results, Severn Trent Laboratories, Inc.
Cell 2-Table 5:	Summary of Verification Wall Sample Results, Severn Trent Laboratories, Inc.

Figures

Cell 2-Figure 1:	Excavation Depth Contours
Cell 2-Figure 2:	Anomalies
Cell 2-Figure 3:	Post-Excavation Gamma Radiation Walkover Survey Results
Cell 2-Figure 4:	Cumulative Frequency Distribution for Cell 2 Gamma Radiation Walkover Survey Data
Cell 2-Figure 5:	Verification Floor Sample Locations and Results
Cell 2-Figure 6:	Verification Wall Sample Locations and Results

Attachments

Cell 2-Attachment A:	E-Mail from NYSDEC to GTEOSI dated August 25, 2003
Cell 2-Attachment B:	E-Mail from NYSDEC to GTEOSI dated October 8, 2003 and a Letter from NYSDEC to GTEOSI dated October 27, 2003
Cell 2-Attachment C:	MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 2-Table 1
Subcell Excavation Depths**

Cell 5	Cell 1*		
	U08*	V08	W08
		16-28 feet	14-21 feet
	U09*	V09	W09
		19-29 feet	14-24 feet
	U10*	V10	W10
		21-29 feet	17-26 feet
	U11*	V11	W11
		23-28 feet	19-27 feet

Notes:
 Excavation depths are approximate.
 * - Backfilled and re-excavated as part of Cell 6 excavation.
 — Subcell Boundary
 — Cell Boundary
 — Building Boundary

Cell 2-Table 2
Anomaly Sample Results

Sample ID	Date	Location	Depth (ft)	Material	Volume (L)	Moisture (%)	Temperature (°C)	Conductivity (µS/cm)	pH	Other Parameters	Notes								
Dry Well	7/21/2003	02074	AF-714	V11W011	10" (dia)	Concrete Dry Well	16	1.5	In Dry Well	0.86	NA	1.57	86.02	Not Listed	NS	NS	0.0011 J (STL)	0.0028 U (STL)	27.6 (STL)
Dry Well	7/18/2003	01947	AG-707	V11W10011	8" (dia.)	Concrete Dry Well	16	1.5	In Dry Well	0.89	NA	2.50	52.86	NS	NS	NS	8.420 J (STL)	0.108 UJ	NS
Dry Well	7/18/2003	01950	AG-707	V11W10011	6" (dia.)	Concrete Dry Well	16	1.5	In Dry Well	NS	NS	NS	NS	NS	NS	NS	0.089 U (STL)	0.089 U (STL)	NS
Tank	7/1/2003	01117	BB-701	V10W010	73"X18"	Metal	9	2	North Wall	0.41	NA	1.49	35.41	8.919	<MDA	<MDA	0.276 (STL)	0.119 (STL)	6.4 (STL)
Tank	7/1/2003	01116	BB-701	V10W010	73"X18"	Metal	9	2	East Wall	0.56	NA	5.33	137.59	9.519	<MDA	<MDA	0.264 (STL)	0.121 U (STL)	6.7 (STL)
Tank	7/1/2003	01119	BB-701	V10W010	73"X18"	Metal	9	2	South Wall	0.34	NA	1.74	41.28	NS	<MDA	<MDA	0.175 (STL)	0.108 U (STL)	2.0 J (STL)
Tank	7/1/2003	01120	BB-701	V10W010	73"X18"	Metal	9	2	West Wall	0.81	NA	3.15	70.22	9.919	<MDA	<MDA	2.781 (STL)	0.104 U (STL)	24.2 (STL)
Tank	7/1/2003	01121	BB-701	V10W010	73"X18"	Metal	10	2	Under USB	0.32	NA	2.52	88.66	10.186	<MDA	<MDA	0.150 (STL)	0.148 U (STL)	1.4 J (STL)
Tank	7/2/2003	01110	BB-701	V10W010	73"X18"	Metal	composite	2	Inside Liquid	224.10	NA	1645.00	35103.45	85.000	NS	NS	NS	NS	NS
Tank	7/2/2003	01124	BB-701	V10W010	73"X18"	Metal	composite	2	Inside Sludge	111 (STL)	23500 J (STL)	1290 (STL)	24500 (STL)	NS	NS	NS	11000 (STL)	120 U (STL)	NS

Cell 2-Table 2 Anomaly Sample Results

Analytes:	
Th23 - Thallium232	TCE - Trichloroethene
U238 - Uranium238	PCE - Tetrachloroethene
U235 - Uranium235	IR - Nitrate
U238 - Uranium238	
Units:	
PCHE - picocuriegram	cpm - counts per minute
mg/kg - milligram/kilogram	dpm/100 cm ² - disintegrations per minute/100 square centimeters
Qualifiers:	
U - Validation qualifier used to indicate that the result was qualified as non-detect.	
J - Validation qualifier used to indicate that the result is considered an estimate.	
QJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.	
D - Validation qualifier used to indicate that analysis was performed on a sample requiring dilution.	
4 - Validation qualifier (for on-site radiological consistency) used to indicate that the result was qualified as non-detect.	
Notes:	
See Cell 2-Table 2 for sample locations.	
On-site sample results are in plain text and include radionuclides (Th232 and U238) analyzed by the gamma spectroscopy system; volatile organic compounds (TCE and PCE) by solid phase microextraction and capillary gas chromatography by Stone Environmental, Inc.; and IR by x-ray fluorescence spectroscopy by Stone Environmental, Inc.	
NA - Analysis was not performed.	
NS - Not sampled.	
MDA - Minimum Detectable Activity.	
BLND - Background.	
RTL - Results are from Green Tree Laboratories, Inc.	
Due to an artifact in the laboratory data reporting program, the on-site analytical data should be interpreted to two significant figures.	
Note 1 - Field radiological information not recorded on these pipe investigation forms is Cell 1.	

Cell 2-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V08	A	03438	30.0	0.20 J	0.24 J	0.26 J			
V08	B	03434	22.5				0.0029 U	0.0029 UJ	1.3 J
V08	B	03435	22.5	0.41 J	3.76 J	4.23			
V08	C*	03378	31.8	0.16 J	1.66	1.80 J			
V08	C*	03441	30.5	0.12 UJ	4.09	3.08 J			
V08	D*	03377	31.7	0.18 J	0.14 U	0.2 UJ			
V08	E*	03380	31.6	0.22 J	7.01	7.19 J			
V09	A	03262	28.2	0.15 J	1.13	0.57 J			
V09	B	03263	26.5	0.18 J	1.26	0.54 UJ			
V09	C	03265	28.1	0.24 J	1.61	1.95 J			
V09	C	03276	28.4				0.0025 U	0.0013 J	0.42 J
V09	D	03436	28.7	0.29 J	1.46 J	1.34			
V10	A	03269	27.9	0.22 J	1.05	1.17 J			
V10	B	03271	27.9	0.11 UJ	1.45	1.50 J			
V10	C	03272	28.3	0.16 J	3.23	3.28 J			
V10	D	03273	28.4	0.33 J	3.98	3.06 J			
V10	D	03279	28.2				0.0025 U	0.0025 U	0.46 J
V11	A	03252	27.9	0.22 J	4.79	4.50 J			
V11	B	03253	27.0	0.14 J	4.30	4.46 J			
V11	C	03254	24.2	0.11 UJ	1.50	1.49 J			
V11	C	03260	27.2				0.0026 U	0.0026 U	2.0 J
V11	D	03255	27.1	0.123 J	9.9	9.8 J			
W08	A	03246	14.8	0.14 UJ	0.4 U	0.59 UJ			
W08	B	03248	14.9	0.41 J	0.32 J	0.6 UJ			
W08	C	03250	19.9	0.31 J	0.46 U	0.56 UJ			
W08	C	03259	20.0				0.0025 U	0.0025 U	4.1 U
W08	D	03251	20.2	0.23 J	0.33 J	0.45 J			
W09	A	03236	15.3	0.1 UJ	0.43	0.17 UJ			
W09	B	03238	14.8	0.18 J	0.33 U	0.4 UJ			
W09	C	03239	20.5	0.136 J	0.32 J	0.35 UJ			
W09	C	03257	20.0				0.0025 U	0.0025 U	0.13 J
W09	D	03240	16.1	0.119 J	0.71	0.53 UJ			
W10	A	03241	20.8	0.15 J	1.68	1.61 J			
W10	B	03243	17.7	0.19 J	1.05	1.18 J			
W10	B	03258	25.5				0.0026 U	0.0026 U	1.0 J
W10	C	03244	18.5	0.29 J	0.34 U	0.5 UJ			
W10	D	03245	21.0	0.12 UJ	0.51 U	0.55 UJ			
W11	A	03261	24.1	0.12 UJ	1.43	1.47 J			
W11	B	03264	22.0	0.15 J	0.98	0.89 J			

Cell 2-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W11	C	03268	21.0	0.20 J	1.48	1.06 J			
W11	D	03270	26.3	0.18 J	6.30	5.91 J			
W11	E	03266	21.6				0.0025 U	0.0025 U	0.70 J

Cell 2-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

TCE - Trichloroethene

U-234 - Uranium-234

PCE - Tetrachloroethene

U-238 - Uranium-238

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detected.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detected and the associated reporting limit is considered an estimate.

Notes:

See Cell 2-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

* - Samples collected from 5 foot deep borings. The radiological results, from 0 to 2.5 ft, were used as VFs for MARSSIM evaluation purposes.

**Cell 2-Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.**

Analyte	VF Type	Sample Result	Sample Depth (feet)	Subcell
Maximum Th-232 (pCi/g)	Floor	0.41 J	22.5	V08
			14.9	W08
	Wall	0.30 J	19.0	W11
Maximum U-234 (pCi/g)	Floor	9.9	27.1	V11
	Wall	30.3 J	18.8	W09
Maximum U-238 (pCi/g)	Floor	9.8 J	27.1	V11
	Wall	31.7	18.8	W09
Maximum TCE (mg/kg)	Floor	0.0029 U	22.5	V08
	Wall	0.0028 U	19.8	V08
Maximum PCE (mg/kg)	Floor	0.0013 J	28.4	V09
	Wall	0.0028 U	19.8	V08
Maximum Ni (mg/kg)	Floor	2.0 J	27.2	W11
	Wall	2.3 J	19.8	V08

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

Cell 2-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V08	03600	22.1	0.106 J	0.20 UJ	0.28 U	0.0025 U	0.0025 UJ	1.0 J
V08	03601	22.5	0.16 J	2.50 UJ	2.26	0.0026 U	0.0026 UJ	1.2 J
V08	03602	16.1	0.20 J	0.36 J	0.8 U	0.0025 U	0.0025 UJ	1.8 J
V08	03603	19.5	0.20 J	1.04 J	1.13	0.0025 U	0.0025 U	1.5 J
V08	03606	19.8	0.29 J	3.56 J	4.53	0.0028 U	0.0028 U	2.3 J
V08	03614	18.1	0.18 J	5.88 J	6.4	0.0026 U	0.0026 U	1.5 J
V08	03633	18.5	0.16 J	1.86 J	1.91	0.0025 U	0.0025 UJ	4.1 U
V08	03638	20.7	0.21 J	4.47 J	3.76	0.0025 U	0.0025 UJ	4 U
V08	03640	17.7	0.19 J	0.25 UJ	0.4 UJ	0.0025 U	0.0025 UJ	4 U
V10	03563	22.9	0.24 J	4.41 J	4.14	0.0025 U	0.0025 U	1.1 J
V10	03564	21.6	0.22 J	2.33 J	2.38	0.0025 U	0.0025 U	0.79 J
V10	03565	23.0	0.15 J	0.56 J	0.37 U	0.0025 U	0.0025 U	0.74 J
W08	03610	18.2	0.13 U	0.30 UJ	0.4 U	0.0025 U	0.0025 U	0.88 J
W08	03612	16.1	0.24 J	0.34 UJ	0.50 U	0.0025 U	0.0025 U	0.70 J
W08	03613	15.9	0.17 J	3.54 J	4.45	0.0026 U	0.0026 U	1.3 J
W09	03578	22.2	0.15 J	8.2 J	7.9	0.0025 U	0.0025 U	1.6 J
W09	03580	21.2	0.19 J	0.18 UJ	0.31 U	0.0025 U	0.0025 U	1.7 J
W09	03585	17.3	0.120 J	0.27 UJ	0.34 U	0.0025 U	0.0025 UJ	0.61 J
W09	03589	19.4	0.066 J	0.23 J	0.25 U	0.0025 U	0.0025 UJ	1.1 J
W09	03591	18.0	0.118 J	0.20 UJ	0.30 U	0.0025 U	0.0025 UJ	0.67 J
W09	03593	20.2	0.16 J	0.75 J	0.79	0.0025 U	0.0025 UJ	0.99 J
W09	03611	19.4	0.19 J	0.58 UJ	0.62 U	0.0026 U	0.0026 U	1.2 J
W09	03615	18.3	0.11 U	2.94 J	2.51	0.0027 U	0.0027 U	1.2 J
W09	03616	16.3	0.17 J	0.88 J	0.54	0.0026 U	0.0026 U	1.9 J
W09	03617	18.6	0.126 J	1.28 J	1.33	0.0025 U	0.0025 U	1.2 J
W09	03630	18.8	0.19 J	30.3 J	31.7	0.0025 U	0.0025 UJ	1.7 J
W09	03631	18.2	0.26 J	0.53 J	0.5 U	0.0025 U	0.0025 UJ	4 U
W09	03632	17.7	0.21 J	0.35 J	0.4 U	0.0026 U	0.0026 UJ	4.1 U
W10	03566	23.0	0.17 J	1.93 J	0.51	0.0025 U	0.0025 U	1.0 J
W10	03567	21.0	0.19 J	0.69 J	0.43	0.0025 U	0.0025 U	0.57 J
W10	03568	20.0	0.15 J	0.35 J	0.28 J	0.0025 U	0.0025 U	0.89 J
W10	03579	19.4	0.18 J	0.32 J	0.3 U	0.0025 U	0.0025 U	0.97 J
W10	03581	21.1	0.22 J	0.86 J	0.76	0.0025 U	0.0025 UJ	1.3 J
W10	03583	21.8	0.15 J	0.76 J	0.96	0.0026 U	0.0026 UJ	1.5 J
W10	03595	20.4	0.15 U	0.26 UJ	0.32 U	0.0025 U	0.0025 UJ	0.67 J
W11	03570	19.0	0.30 J	3.68 J	4.01	0.0026 U	0.0026 U	1.7 J
W11	03571	21.5	0.18 J	2.37 J	2.13	0.0026 U	0.0026 U	1.8 J
W11	03573	19.6	0.089 J	0.34 UJ	0.46 U	0.0026 U	0.0026 U	1.6 J
W11	03574	22.3	0.22 J	0.52 J	0.33 J	0.0026 U	0.0026 U	0.94 J
W11	03628	21.5	0.096 J	1.05 J	0.51	0.0026 U	0.0026 UJ	4.1 U
W11	03629	21.4	0.19 J	6.56 J	5.60	0.0025 U	0.0025 UJ	4.1 U

Cell 2-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

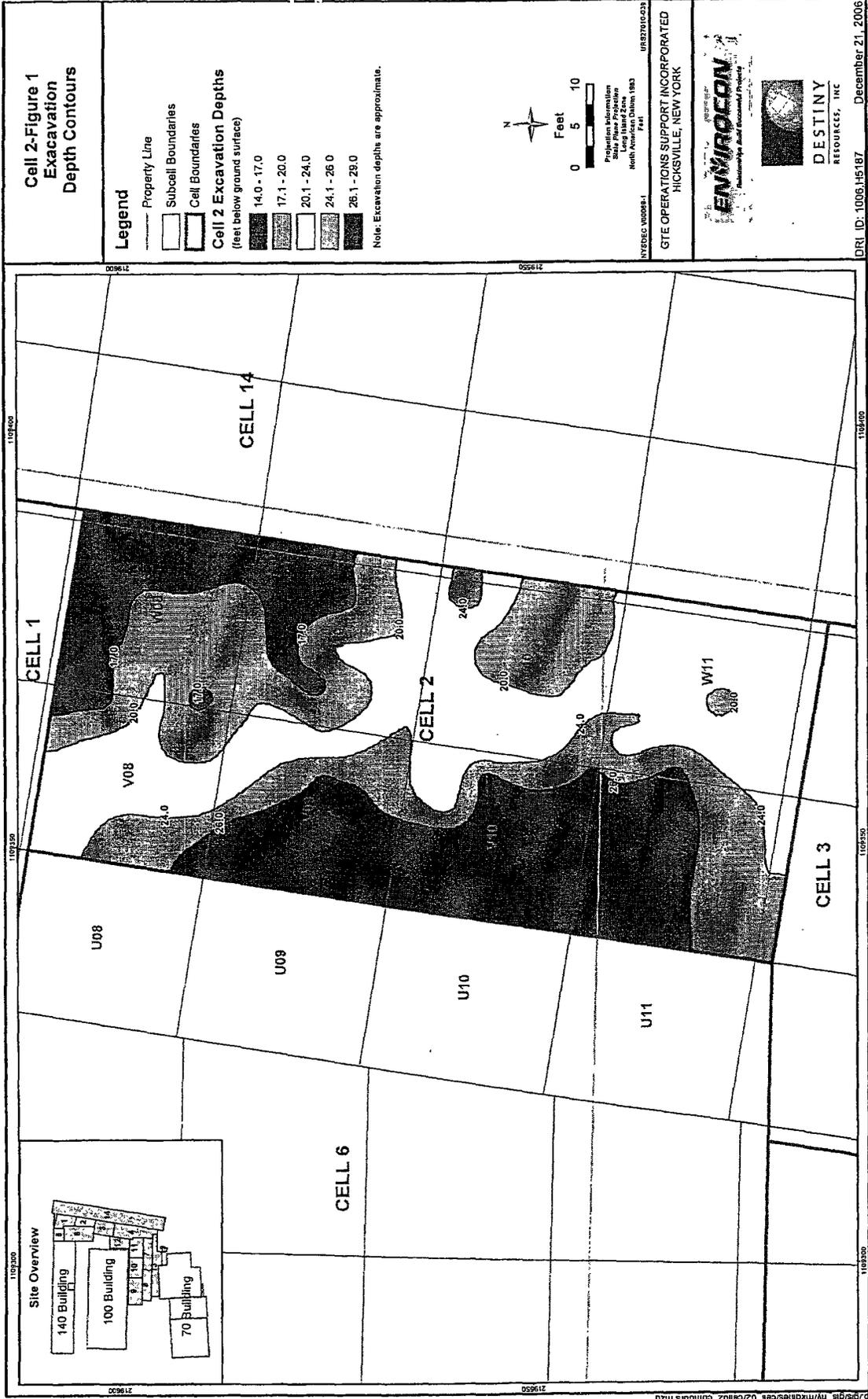
J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 2-Figure 6 for sample ids and associated locations.

Blank cell indicates analysis was not performed.



Cell 2-Figure 2 Anomalies

Legend

- Pipes
- Property Line
- ▨ Historic Underground Storage Tank (UST)
- Dry Well
- ▤ Leaching Pool
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

See Cell 2-Table 2 for summarized sample results.



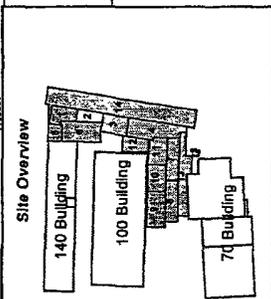
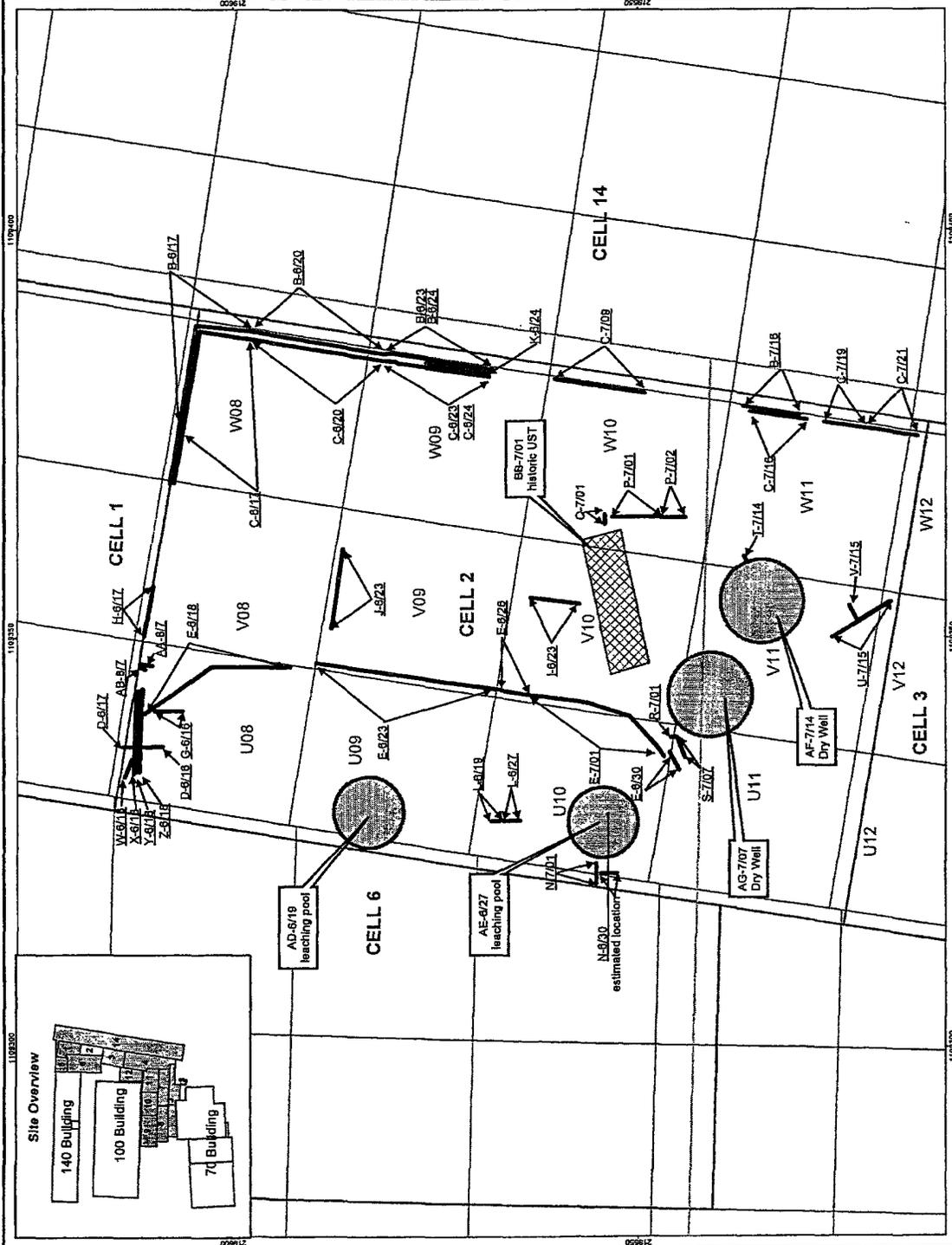
Feet
0 5 10

Project: 10/2008
State: Pennsylvania
Long Island Zoned
North Atlantic
NYDEC V0088-1
URS 2/10/08

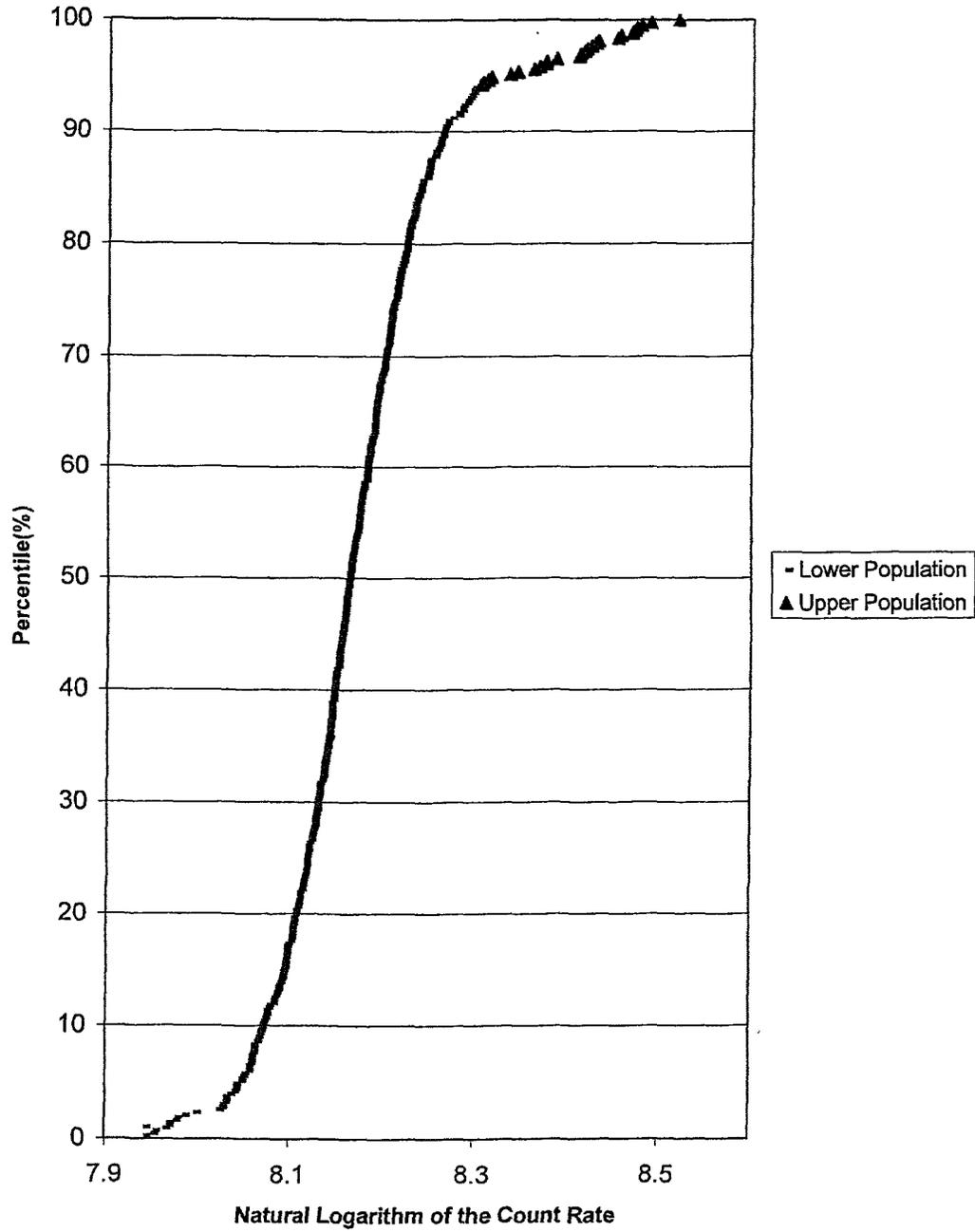
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

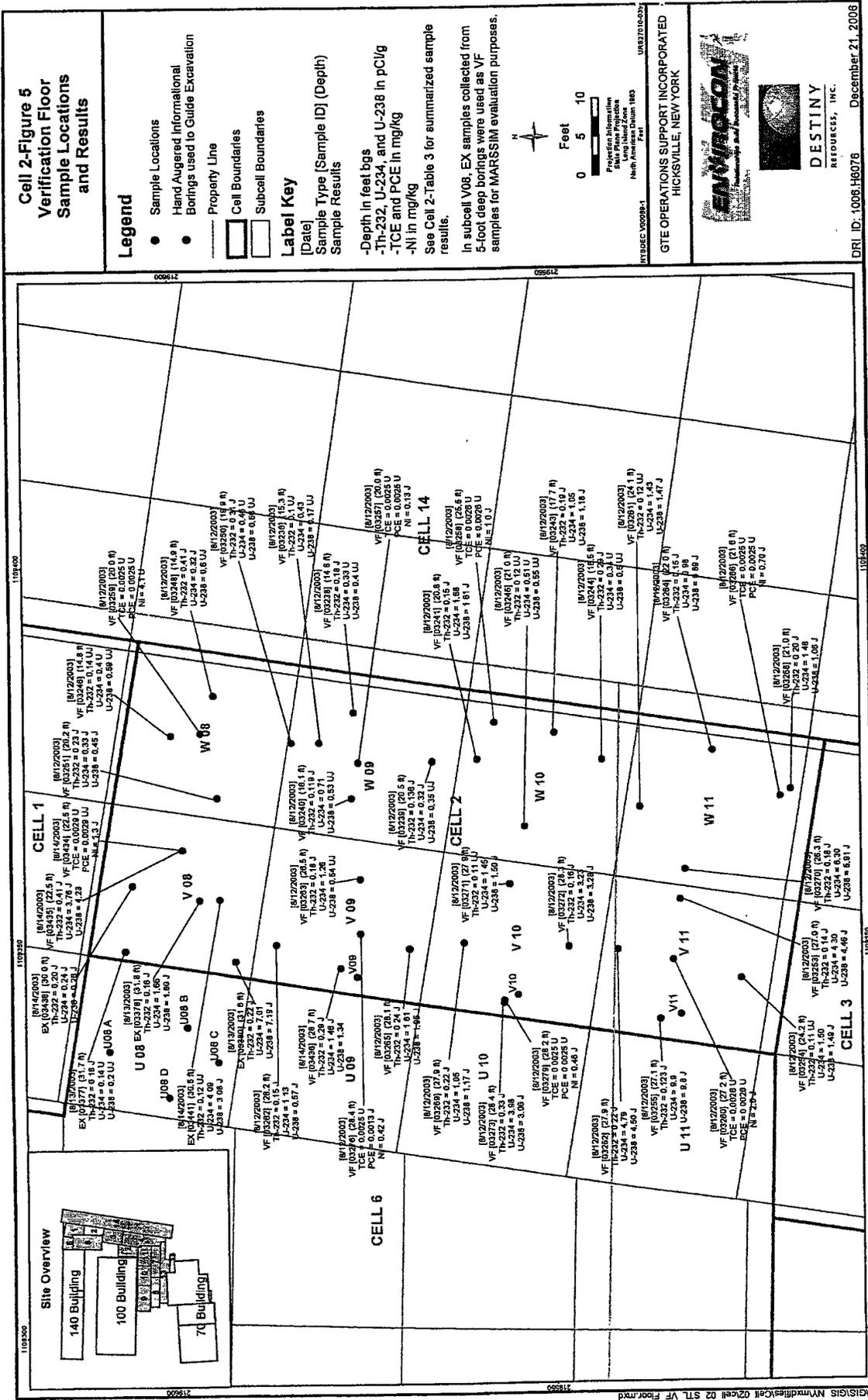


DRI ID: 100815408 December 21, 2008



Cell 2-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data





Cell 2-Figure 6 Verification Wall Sample Locations and Results

Legend

- Sample Locations
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key

[Date]
Sample Type [Sample ID] (Depth)
Sample Results

-Depth in feet bgs
-Th-232, U-234, and U-238 in pCi/g
-TCE and PCE in mg/kg
-Ni in mg/kg

See Cell 2-Table 5 for summarized sample results.



Feet
0 5 10

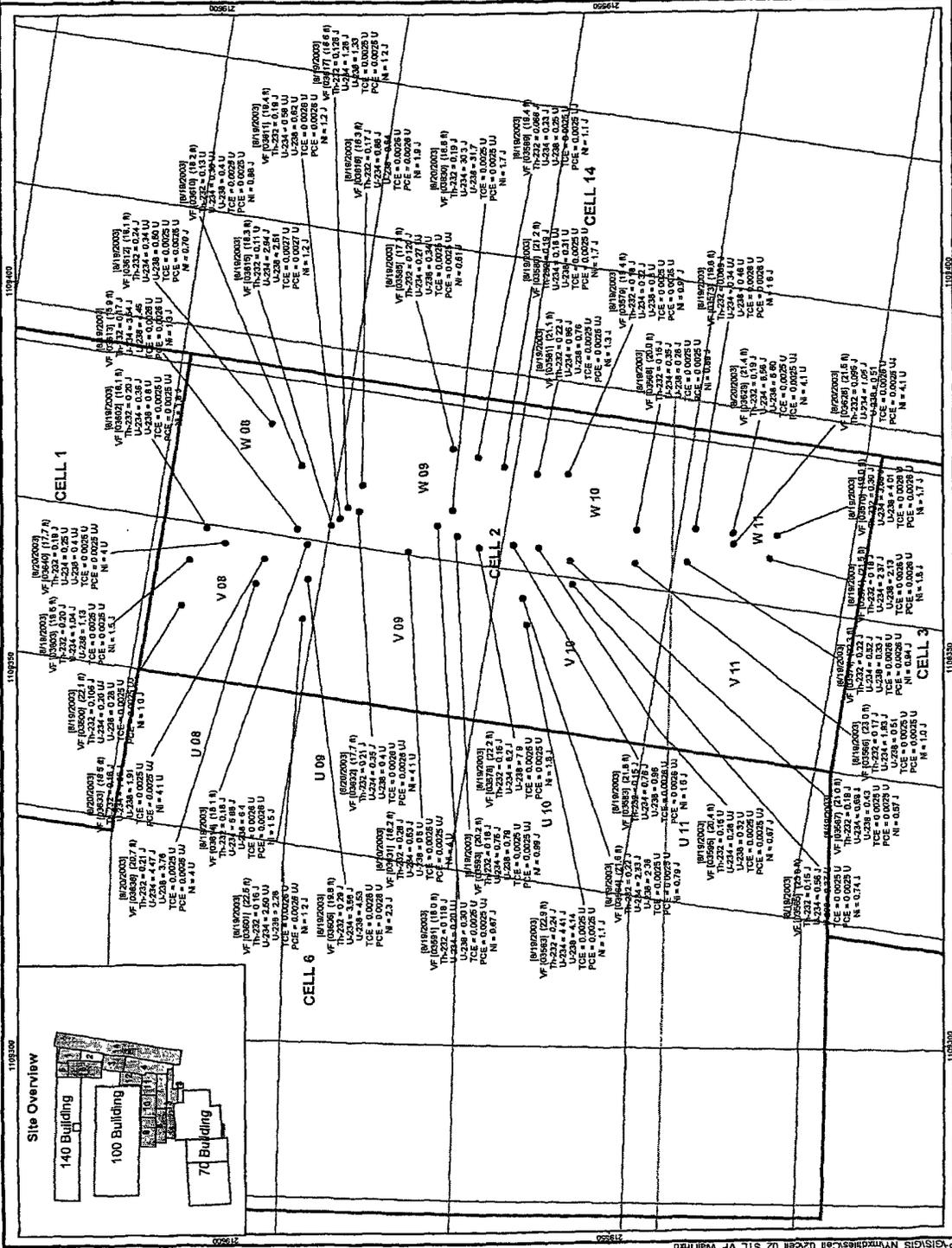
Projection Information
State Plane Projection
North American Datum 1983
Feet

WRSZ710202
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DESTINY
RESOURCES, INC.

DRI ID: 1006-H6100 December 21, 2006





"Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: "Jerry Riggi" <jmriggi@gw.dec.state.ny.us>, "Robert Stewart"
<rrstewar@gw.dec.state.ny.us>
Subject: Cell 2 Data

08/25/2003 11:33 AM

We have reviewed the boring, wall, and confirmation sample data you provided last week. We agree that these results from units V08 through V11 and units W08 through W11 are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling those units. We understand that fill placed in units U08 through U11 will be removed, those units will be part of cell 6, and they will be remediated further. Once we have reviewed your letter and complete data set, we'll send a formal response.

Barbara Youngberg
Chief, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003168

"Robert Stewart"
<rrstewar@gw.dec.s
Agostinelli/EMPL/TX/Verizon@VZNotes
tate.ny.us>
<jmriggi@gw.dec.state.ny.us>, "Walter Parish"

10/08/2003 12:18
September 23, 2003, Sylvania, #V00089-1
PM

To: Jean M.
cc: "Jerry Riggi"
<wjparish@gw.dec.state.ny.us>
Subject: Borrow Soils Report,

Jean,

Based on the data provided in the Borrow Soil Report dated September
23, 2003, these soils are suitable for use as backfill.

Bob Stewart
Phone: (631) 444-0244



October 27, 2003

Jean Agostinelli
GTE Operations Support Inc.
140 Cantiague Rock Road
Hickville, NY 11801

Re: 1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack
2) Borrow Soils - Mercy Hospital Stockpile
3) Borrow soils - Round Swamp and Winding Stockpile

Dear Ms. Agostinelli:

The Department has reviewed the above borrow soils reports and has the following recommendations:

1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack

- ▶ **Commack:** I recommend that you do not use the soils from Commack due the detection of 140 ppm of chromium in one of the characterization samples.
- ▶ **111 Pit:** I noticed that one of the characterization samples detected 120 ppb of benzo(a) pyrene. This detection is above the TAGM-4046 recommended cleanup objective of 61 ppb for this compound. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentration of the contaminant. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TICs were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

- ▶ **JDP Stock Pile 2:** Regarding chemical considerations, I have no objections to you using these soils as backfill. I am awaiting Jerry Riggi's radiological evaluation of these borrow soils. His evaluation will be forwarded to you, when available.

Attachment B
Page 2 of 3

2) Borrow Soils - Mercy Hospital Stockpile

Two of the characterization samples detected 290 ppb and 100 ppb of benzo(a) pyrene. One of these samples also detected 290 ppb of benzo(a) anthracene. The TAGM-4046 recommended cleanup objectives for benzo(a) pyrene and benzo(a) anthracene are 61 ppb and 224 ppb, respectively. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentrations of the contaminants. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TIC were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

I would also like to note that 100 ppb of PCBs was detected in one of the samples. This concentration is well below the TAGM -4046 cleanup objective. However, I would check the historical use of the property from where this stockpile originated to see if PCBs were historically used there. Additional characterization samples for PCBs are recommended if PCB usage is discovered.

3) Borrow Soils - Round Swamp and Winding Stockpile

Based on the results of the three characterization samples, the Department has no objections to you using these soils as backfill. However, please note that, based on figure 1, this stockpile is located near to the entrance to the inactive hazardous waste site known as Old Bethpage Landfill (Site # 130001). This landfill historically received municipal and industrial wastes. I recommend that you verify that the stockpiled soils could not have been impacted by the former operations at this landfill.

Please note that it is your responsibility to adequately characterize the borrow soils. My above recommendations are made under the assumption that your characterization samples accurately reflect the concentrations present in the large volume of soils evaluated.

If you have any questions, please do not hesitate to call me at (631) 444-0244.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc by e-mail: W. Parish
J. Riggi

MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, the reconfigured Cell 2, passed the MARSSIM¹ Sign Test and the area is considered releasable. The reconfigured Cell 2 consists of subcells V8 to V11 and W8 to W11. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of the reconfigured Cell 2 was performed using the VF floor sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 34 floor VF floor samples collected and analyzed for radiological contaminants from subcells V8 to V11 and W8 to W11 for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 34 samples are presented in the table on page 3 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this attachment were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 2 (Attachment page 5), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 34 soil sample analyses.

Beginning on page 4 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 5 and 6 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 6) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on page 3 of this Attachment.

The third report is on pages 7 through 10 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the *Sign Test* on the samples results listed on page 3. On the first page of this report (Attachment page 7) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 10) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.15. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 2

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
3236	0.1 UJ	0.43	0.17 UJ
3238	0.18 J	0.33 U	0.4 UJ
3239	0.136 J	0.32 J	0.35 UJ
3240	0.119 J	0.71	0.53 UJ
3241	0.15 J	1.68	1.61 J
3243	0.19 J	1.05	1.18 J
3244	0.29 J	0.34 U	0.5 UJ
3245	0.12 UJ	0.51 U	0.55 UJ
3246	0.14 UJ	0.4 U	0.59 UJ
3248	0.41 J	0.32 J	0.6 UJ
3250	0.31 J	0.46 U	0.56 UJ
3251	0.23 J	0.33 J	0.45 J
3252	0.22 J	4.79	4.50 J
3253	0.14 J	4.30	4.46 J
3254	0.11 UJ	1.50	1.49 J
3255	0.123 J	9.9	9.8 J
3261	0.12 UJ	1.43	1.47 J
3262	0.15 J	1.13	0.57 J
3263	0.18 J	1.26	0.54 UJ
3264	0.15 J	0.98	0.89 J
3265	0.24 J	1.61	1.95 J
3268	0.20 J	1.48	1.06 J
3269	0.22 J	1.05	1.17 J
3270	0.18 J	6.30	5.91 J
3271	0.11 UJ	1.45	1.50 J
3272	0.16 J	3.23	3.28 J
3273	0.33 J	3.98	3.06 J
3377	0.18 J	0.14 U	0.2 UJ
3378	0.16 J	1.66	1.80 J
3380	0.22 J	7.01	7.19 J
3435	0.41 J	3.76 J	4.23
3436	0.29 J	1.46 J	1.34
3438	0.20 J	0.24 J	0.26 J
3441	0.12 UJ	4.09	3.08 J

Notes:

Cell area = 335 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as nondetect.

J - Validation qualifier used to indicate that the associated value is considered an estimate.

UJ - Validation qualifier used to indicate that the associated reporting limit is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLW units are pCi/g.
Building surface DCGLW units are dpm/100 cm².

Contaminant	Type	DCGLW	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

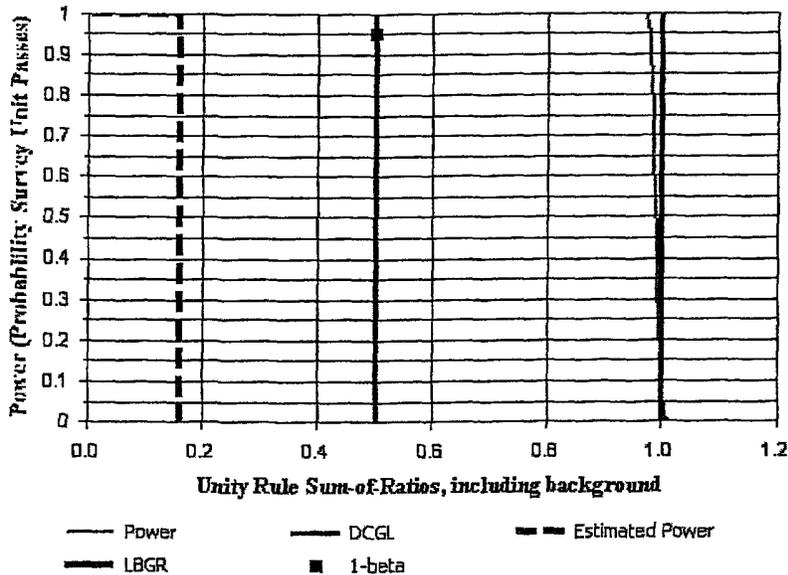


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 2, V8-11 & W8-11 with STL Data		
Comments:			
Area (m ²):	335	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.02
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.16
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" collimated NaI		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.2 \pm 0.06	N/A
U-234	2.2 \pm 0.15	N/A
U-238	2.2 \pm 0.15	N/A

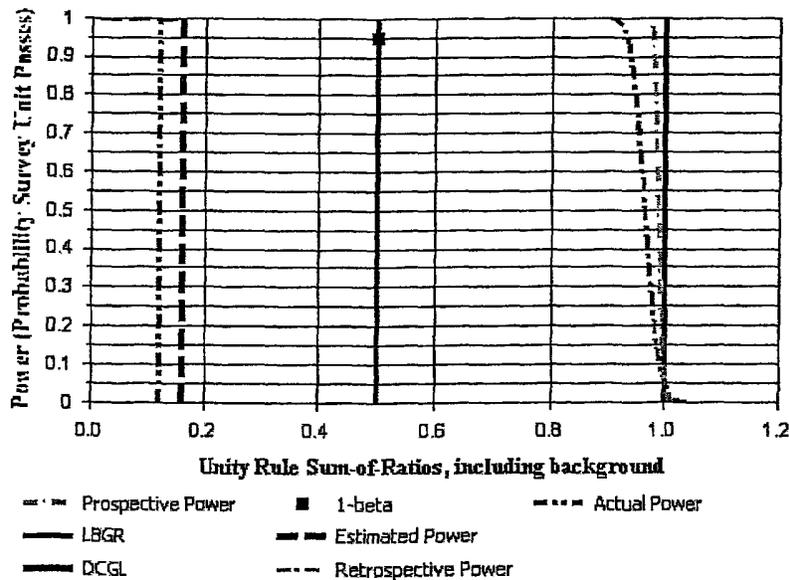


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 2, V8-11 & W8-11 with STL Data
Report Number: 1
Survey Unit Samples: 34
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
3236	S	0.1	0.43	0.17
3238	S	0.18	0.33	0.4
3239	S	0.14	0.32	0.35
3240	S	0.12	0.71	0.53
3241	S	0.15	1.68	1.61
3243	S	0.19	1.05	1.18
3244	S	0.29	0.34	0.5
3245	S	0.12	0.51	0.55
3246	S	0.14	0.4	0.59
3248	S	0.41	0.32	0.6
3250	S	0.31	0.46	0.56
3251	S	0.23	0.33	0.45
3252	S	0.22	4.79	4.5
3253	S	0.14	4.3	4.46
3254	S	0.11	1.5	1.49
3255	S	0.12	9.9	9.8
3261	S	0.12	1.43	1.47
3262	S	0.15	1.13	0.57
3263	S	0.18	1.26	0.54
3264	S	0.15	0.98	0.89
3265	S	0.24	1.61	1.95
3268	S	0.2	1.48	1.06
3269	S	0.22	1.05	1.17
3270	S	0.18	6.3	5.91
3271	S	0.11	1.45	1.5
3272	S	0.16	3.23	3.28
3273	S	0.33	3.98	3.06
3377	S	0.18	0.14	0.2
3378	S	0.16	1.66	1.8
3380	S	0.22	7.01	7.19
3435	S	0.41	3.76	4.23
3436	S	0.29	1.46	1.34
3438	S	0.2	0.24	0.26
3441	S	0.12	4.09	3.08



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
3236	S	0.05
3238	S	0.08
3239	S	0.06
3240	S	0.07
3241	S	0.12
3243	S	0.11
3244	S	0.12
3245	S	0.06
3246	S	0.07
3248	S	0.16
3250	S	0.13
3251	S	0.1
3252	S	0.26
3253	S	0.23
3254	S	0.1
3255	S	0.44
3261	S	0.1
3262	S	0.09
3263	S	0.1
3264	S	0.09
3265	S	0.16
3268	S	0.12
3269	S	0.12
3270	S	0.31
3271	S	0.1
3272	S	0.19
3273	S	0.26
3377	S	0.07
3378	S	0.13
3380	S	0.36
3435	S	0.31
3436	S	0.16
3438	S	0.08
3441	S	0.19



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	34	N/A	N=13
Mean (SOR)	0.15	N/A	0.16
Median (SOR)	0.12	N/A	N/A
Std Dev (SOR)	0.09	N/A	0.02
High Value (SOR)	0.44	N/A	N/A
Low Value (SOR)	0.05	N/A	N/A

Cell 3 Status Report

INTRODUCTION

Cell 3 is comprised of all or portions of subcells U12 to W12, U13 to W13, U14 to W-14, U15 to W15, and U16 to W16. Cell 3 is located on the eastern portion of the 100 Property (Cell 3-Figure 1 and Figure 6 in Volume I). Excavation of Cell 3 began on April 12, 2004 and was completed on May 11, 2004. Verbal approval to backfill Cell 3 was received from NYSDEC representatives on May 18, 2004 and documented in an e-mail on February 4, 2005 (Cell 3-Attachment A). A formal request to backfill Cell 3 was submitted in a report to the NYSDEC titled *Cell 3 – Attainment of Radiological and Chemical Cleanup Levels* dated June 12, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces. Although on-Site data indicated residual PCE (1.83 mg/kg) remained in subcell W15, STL final verification results indicated a PCE concentration of 0.016 mg/kg (below the cleanup level of 1.82 mg/kg) (Cell 3-Table 3 and Cell 3-Figure 5). The STL results demonstrate that chemical cleanup levels were attained in all subcells. NYSDEC was informed of the residual impact and provided authorization to backfill.

Cell 3 was backfilled beginning May 20, 2004 and was completed on June 9, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 2). Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instrumentation. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Survey and Sampling: Spagnoli Road (SPAG2), Melville, NY*, dated March 24, 2004. Approval to use these soils for backfill was granted from the NYSDEC in a letter dated April 1, 2004 (Cell 3-Attachment B).

DEPTHS OF EXCAVATION

Cell 3 was excavated to depths ranging from 16 to 24 ft bgs. The excavation depths for each subcell are provided in Cell 3-Table 1 and are shown on Cell 3-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 13,505,000 pounds of soil and debris (625 Lift LinersTM) were removed from Cell 3 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 3, various anomalies were encountered. The anomalies were pipes, concrete from leaching pools, and drum remnants and debris. A list of Cell 3 anomalies along with analytical results from anomaly samples is provided in Cell 3-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 3-Figure 2. All of the anomalies encountered during the excavation activities in Cell 3 were sized to fit and placed in Lift LinersTM and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 3, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 3-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 3-Figure 4 depicts a CFD plot of the 647 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 3-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I). Since less than 25 percent of subcells U16 to W16 are in Cell 3, the portions of these subcells that are north of the sheet pile wall are considered part of subcell U15 to W15, respectively, for sampling purposes.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

SYSTEMATIC SOIL SAMPLING

Additional soil borings were conducted following the Phase I soil remediation and the results were submitted to NYSDEC in *Subsurface Soil Sampling and Analysis Report, Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation*, Rev 1: October 2005. The data collected from the boring in Cell 3 did not identify contaminants above the Site cleanup levels.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 3-Table 3 and are shown on Cell 3-Figure 5. Cell 3-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 3, passed this evaluation (Cell 3-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the radiological and chemical Site cleanup levels were attained for Cell 3.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 3-Table 1:	Cell 3 Subcell Excavation Depths
Cell 3-Table 2:	Cell 3 Anomaly Sample Results
Cell 3-Table 3:	Cell 3 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 3-Table 4:	Cell 3 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.

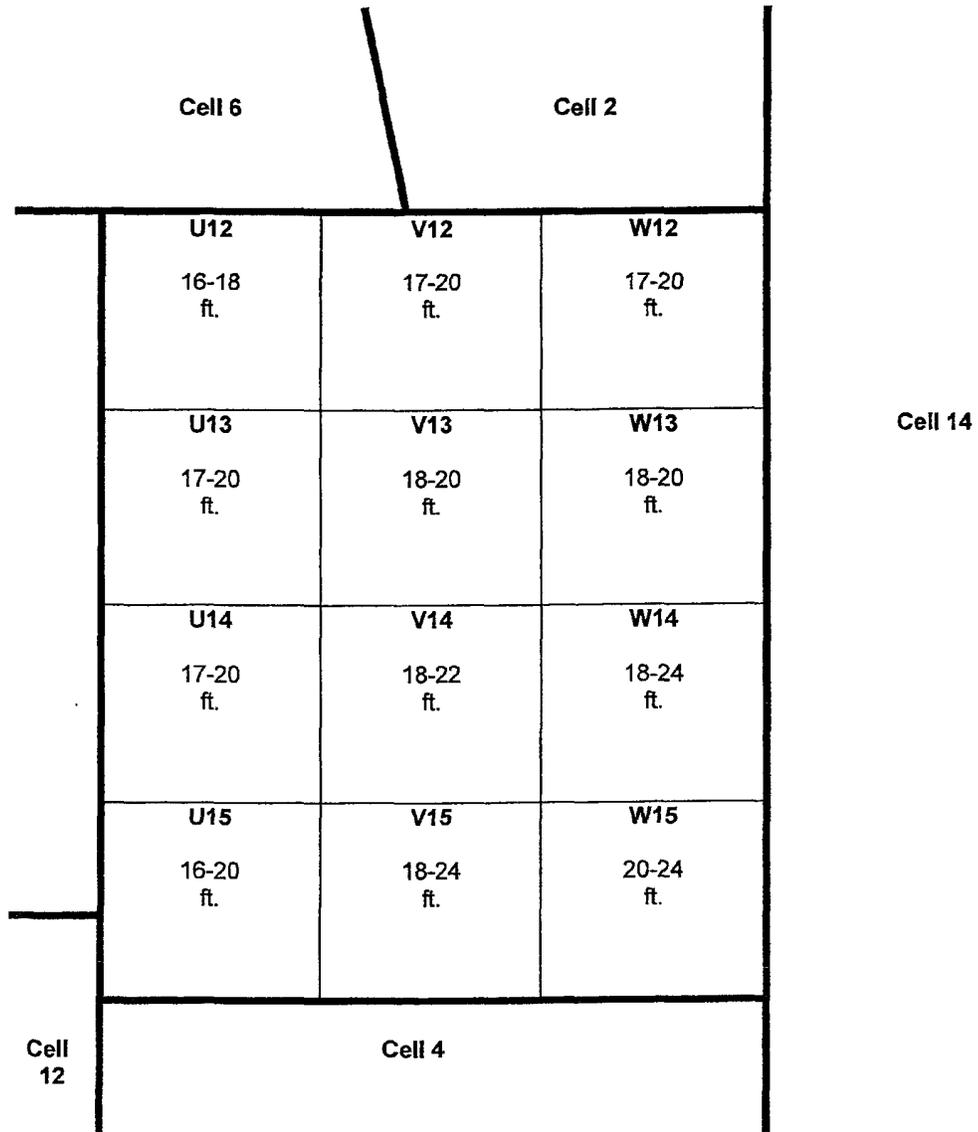
Figures

Cell 3-Figure 1:	Cell 3 Excavation Depth Contours
Cell 3-Figure 2:	Cell 3 Anomalies
Cell 3-Figure 3:	Cell 3 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 3-Figure 4:	Cumulative Frequency Distribution for Cell 3 Gamma Radiation Walkover Survey Data
Cell 3-Figure 5:	Cell 3 Verification Floor Sample Locations and Results

Attachments

Cell 3-Attachment A:	E-Mail from NYSDEC to GTEOSI dated February 4, 2005
Cell 3-Attachment B:	Letter from NYSDEC to GTEOSI dated April 1, 2004
Cell 3-Attachment C:	Cell 3 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results

**Cell 3 -Table 1
Subcell Excavation Depths**



Notes:
Excavation depths are approximate.
— Subcell Boundary
— Cell Boundary

Cell 3-Table 2
Anomaly Sample Results

Analytes:
 Th-232 - Thorium-232
 U-234 - Uranium-234
 U-235 - Uranium-235
 U-238 - Uranium-238
 TCE - Trichloroethene
 PCE - Tetrachloroethene
 Ni - Nickel
 epm - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Units:
 PCFB - picogram/gram
 mg/kg - milligram/kilogram
 epm - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Qualifiers:
 U - Validation qualifier used to indicate that the result was qualified as non-detect.
 J - Validation qualifier used to indicate that the result is considered an estimate.
 UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
 - - Validation qualifier (for on-site radiological surveillance) used to indicate that the result was qualified as non-detect.

Notes:
 See Cell 3-Figures 2 for sample locations.
 On-site sample results are in plain text and include radionuclides (Th-232 and U-238) analyzed by the gamma spectroscopy system, volatile organic compounds (TCE and PCE) by solid phase microextraction and capillary gas chromatography by Stone Environmental, Inc.
 NA - Analysis was not performed.
 NS - Not sampled.
 STL - Results are from Severn Trent Laboratories, Inc.
 MDA - Minimum Detectable Activity
 Due to an effort to the laboratory data tracking program, the on-site analytical data should be interpreted to two significant figures.
 - - Due to elevated levels, gamma readings were performed with an exposure rate measurement detector that reported in millirem/minute per hour (mR/h)

Cell 3-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U12	A	14963	16.3	0.068 J	0.47	0.34			
U12	B	14964	17.3	0.174 J	0.48	0.44			
U12	C	14965	17.5	0.087 J	0.43	0.61	0.0025 U	0.0025 U	1.0 J
U12	D	14966	16.5	0.164	0.51	0.56			
U13	A	14953	17.7	0.124 J	0.30	0.283	0.0025 U	0.0025 U	0.99 J
U13	B	14954	18.4	0.120 J	0.226 J	0.266			
U13	C	14955	17.9	0.135 J	1.38	1.73			
U13	D	14956	17.2	0.30 J	0.199 J	0.235			
U14	A	15123	17.8	0.237	1.21	1.03			
U14	B	15124	18.7	0.180	3.47	3.53	0.0026 U	0.00067 J	3.1 J
U14	C	15125	18.0	0.202	5.08	5.00			
U14	D	15126	17.1	0.094 J	3.77	4.21			
U15	A	15119	17.7	0.172	1.97	2.10	0.0026 U	0.00073 J	0.65 J
U15	B	15120	18.0	0.147	0.84	0.72			
U15	C	15121	16.7	0.183	0.40	0.55			
U15	D	15122	16.5	0.101	0.120	0.139 J			
V12	A	14989	17.5	0.089 J	2.91	2.73			
V12	B	14991	18.3	0.057 J	2.78	2.49			
V12	C	14992	18.3	0.185 J	2.92	2.36			
V12	D	14993	17.9	0.202 J	4.16	2.87	0.0025 U	0.00042 J	0.68 J
V13	A	15047	18.6	0.068 J	1.85	1.89			
V13	B	15048	19.2	0.117	0.216	0.242	0.0025 U	0.00061 J	0.51 J
V13	C	15050	19.5	0.154	0.223	0.212			
V13	D	15051	18.7	0.156	0.52	0.46			
V14	A	15127	20.0	0.157	3.04	3.20			
V14	B	15128	21.1	0.079 J	0.54	0.45			
V14	C	15129	20.8	0.096 J	3.17	3.13	0.0026 U	0.0021 J	1.5 J
V14	D	15130	19.8	0.168	2.09	2.04			
V15	A	15075	20.8	0.099 J	2.46	2.41			
V15	B	15076	21.7	0.148	1.05	0.95	0.00012 J	0.0034	1.6 J
V15	C	15077	20.6	0.214	0.67	0.46			
V15	D	15078	19.5	0.227 J	3.61	3.07			
W12	A	14996	17.4	0.160 J	0.230 J	0.157	0.0025 U	0.0025 U	0.81 J
W12	B	14998	17.7	0.164 J	0.76	0.77			
W12	C	14999	18.1	0.093 J	1.62	1.59			
W12	D	15001	18.1	0.101 J	2.17	2.21			
W13	A	15042	18.2	0.260 J	0.179 J	0.209			
W13	B	15043	18.1	0.43 J	0.52	0.60	0.00011 J	0.00065 J	0.65 J
W13	C	15045	19.2	0.145 J	0.169 J	0.201			
W13	D	15046	18.9	0.46 J	0.225 J	0.196			
W14	A	15131	19.9	0.097 J	0.87	0.208			
W14	B	15132	20.1	0.111	0.124 J	0.099 J			
W14	C	15133	21.7	0.156	0.281	0.34	0.0026 U	0.00087 J	1.3 J
W14	D	15134	20.9	0.145	5.06	4.97			
W15	A	15071	23.4	0.155	1.16	1.26			
W15	B	15072	23.9	0.152	0.190	0.238			

Cell 3-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	PCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
W15	C	15073	22.6	0.31	0.72	0.84	0.0026 U	0.016	1.6 J
W15	D	15074	22.5	0.164	1.10	0.95			

Cell 3-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 3-Figure 5 for sample ids and associated locations.

Blank cell indicates analysis was not performed.

Cell 3-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	0.46 J	18.9	W13
Maximum U-234 (pCi/g)	5.08	18.0	U14
Maximum U-238 (pCi/g)	5	18.0	U14
Maximum TCE (mg/kg)	0.00012 J	21.7	V15
Maximum PCE (mg/kg)	0.016	22.6	W15
Maximum Ni (mg/kg)	3.1 J	18.7	U14

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 3-Figure 1
Excavation
Depth Contours**

Legend

- Property Line
- ▬ Subcell Boundaries
- ▬ Cell Boundaries

**Excavation Depth Contour
(feet below ground surface)**

- 16.0 - 17.0
- 17.1 - 18.0
- 18.1 - 20.0
- 20.1 - 22.0
- 22.1 - 24.0

Note: Excavation depths are approximate.



Feet
0 5 10

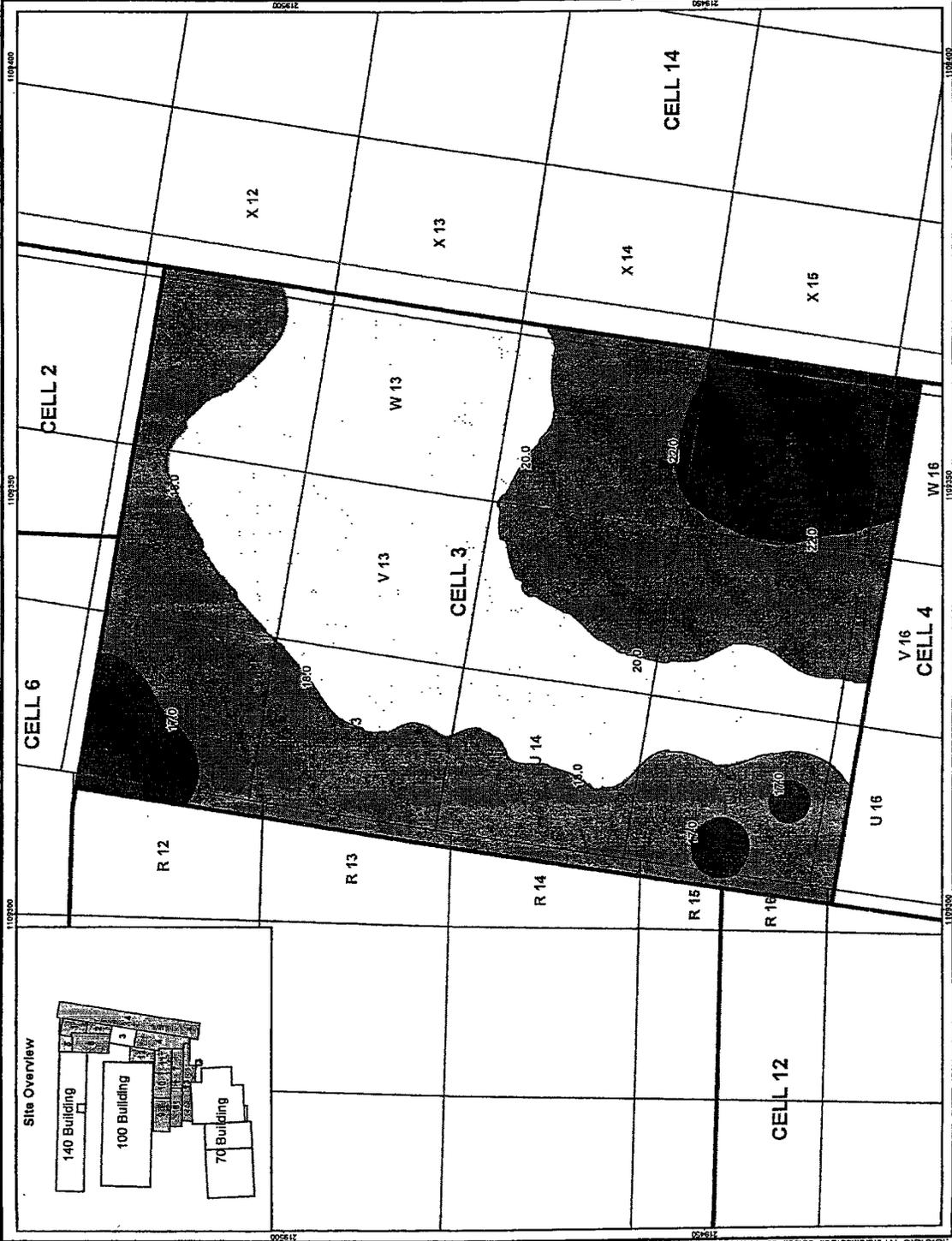
Projection Information
Site Plans Program
North American Datum 1983
Feet

NYDEC 000000-1
UNSYD000-320
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

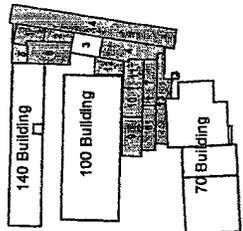


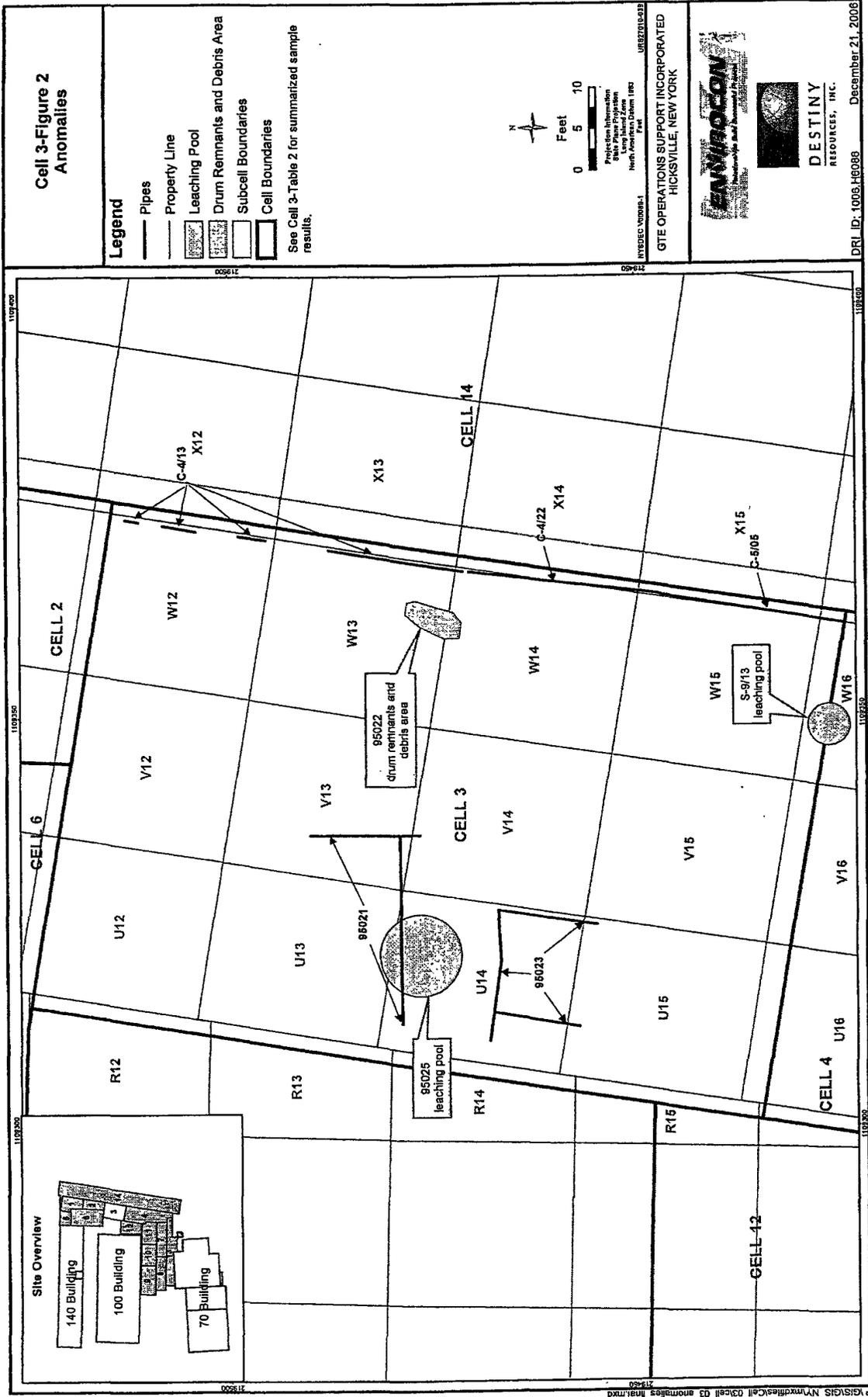
**DESTINY
RESOURCES, INC.**

DRI ID: 1006.H6081 December 21, 2008



Site Overview

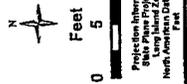




**Cell 3-Figure 2
Anomalies**

- Legend**
- Pipes
 - Property Line
 - ▭ Leaching Pool
 - ▭ Drum Remnants and Debris Area
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

See Cell 3-Table 2 for summarized sample results.



UNRECORDED
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DRI ID: 1005.H6088 December 21, 2006

**Cell 3-Figure 3
Post-Excavation
Gamma Radiation
Walkover Survey Results**

Legend

- Lower Population - 90% of data points (0 - 3959 cpm)
- Middle Population - 7% of data points (3960 - 4179 cpm)
- Upper Population - 3% of data points (4180 - 4688 cpm)

- Property Line
- Subcell Boundaries
- Cell Boundaries

Feet
0 5 10

North Arrow

Physical Information
State Plane Projection
Long Island Zone
North American Datum, 1983
North to East
UNB27010-032

NY DEC V00084-1

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

EMERSON

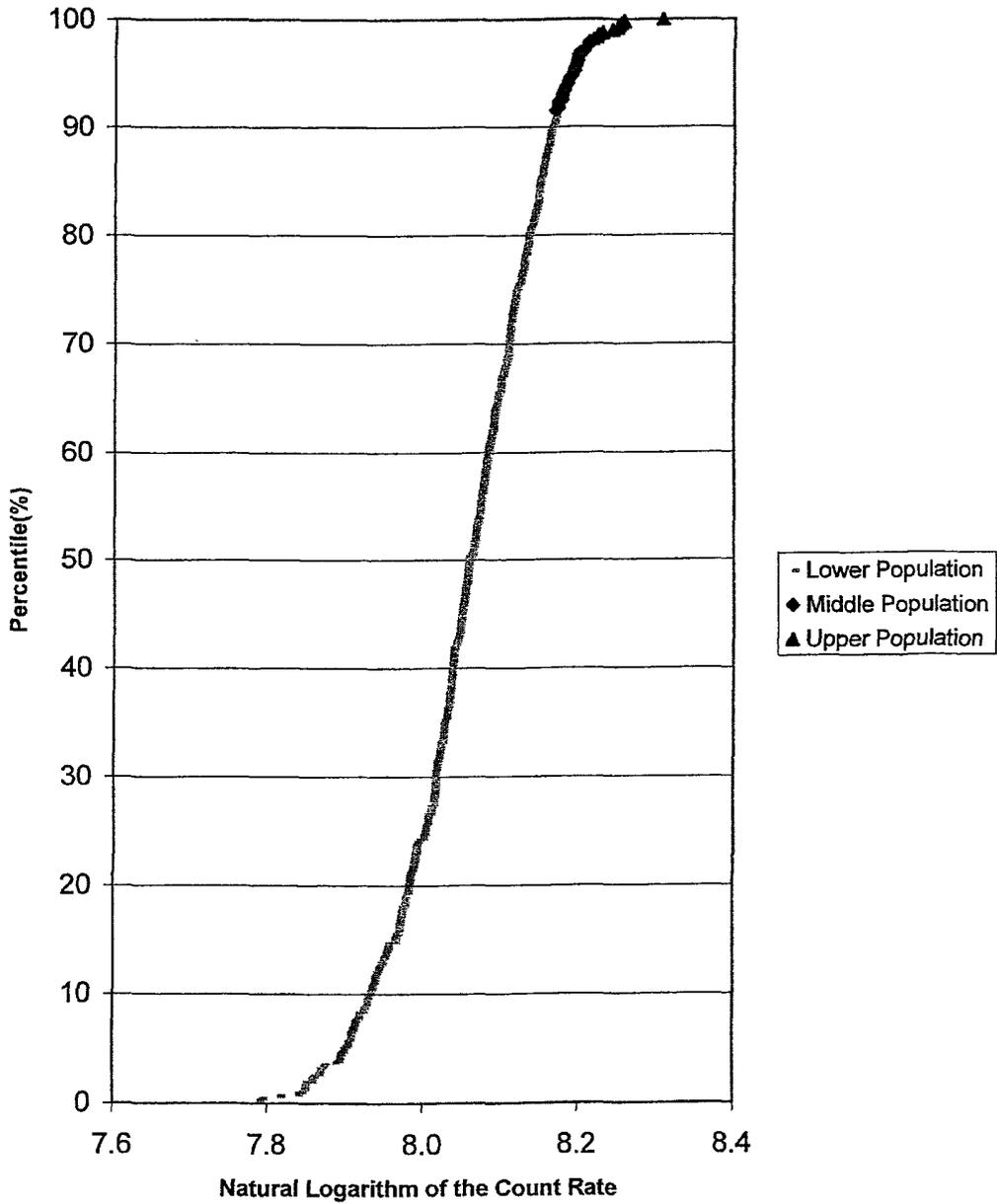
DESTINY
RESOURCES, INC.

DRI ID: 1006.H8076 December 21, 2006



PG:1913 NYTRdRes/C# 03rcll 03 walkover.mxd 219450 219400 219350 219300

Cell 3-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



**Cell 3-Figure 5
Verification Floor
Sample Locations
and Results**

Legend

- Sample Locations
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key

[Date]
Sample Type [Sample ID] (Depth)
Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

See Cell 3-Table 3 for summarized sample results.



0 5 10
Feet

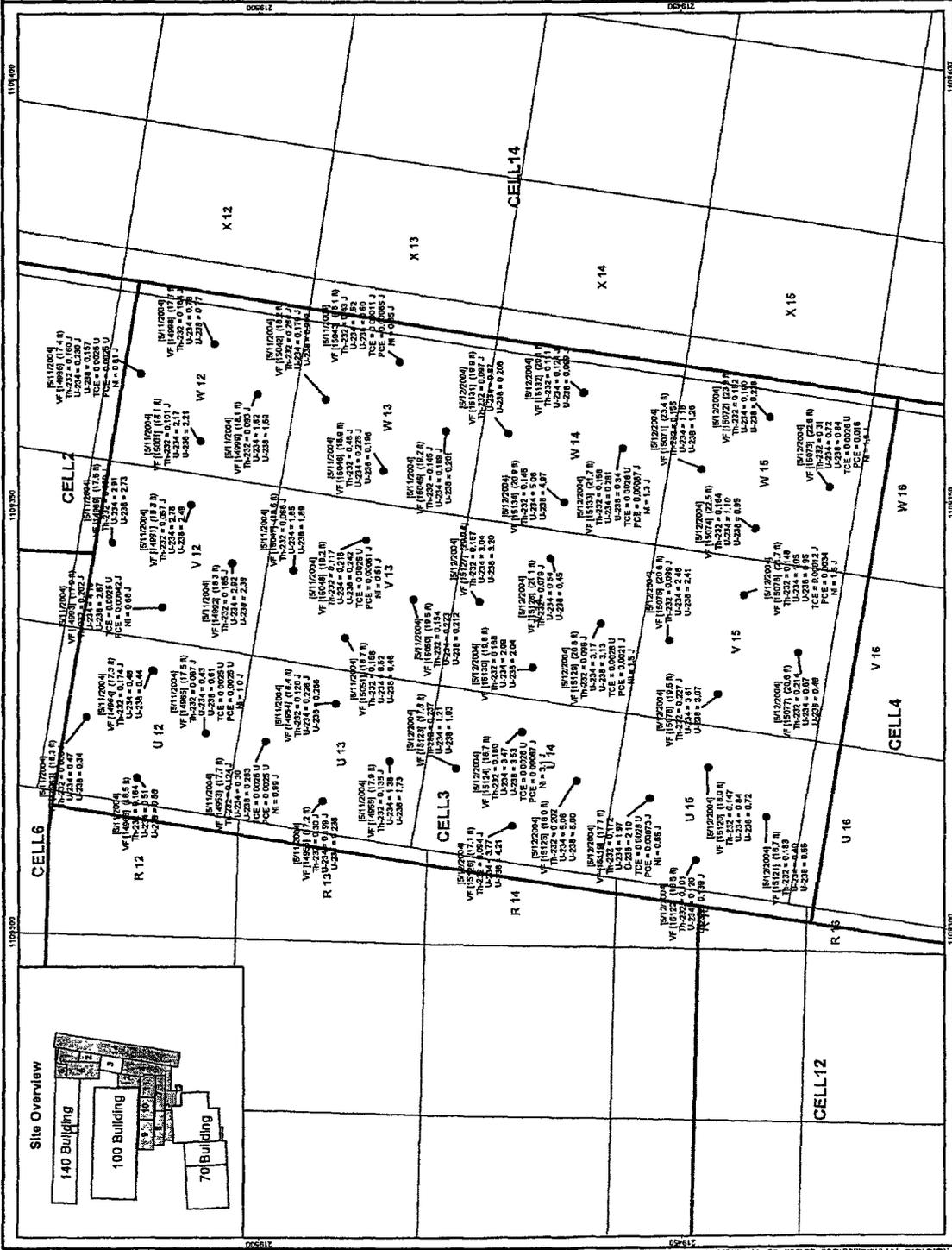
Preparation Information
State: Pennsylvania
North American Datum: 1983
File: URS27010-029

U-238 = 0.008 U

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DRI ID: 1008.16384 December 21, 2006



Bill Hoey

From: Jerry Riggi [jmrigger@gw.dec.state.ny.us]
Sent: Friday, February 04, 2005 11:46 AM
To: billhoey@capecod.net
Subject: Cell 3 and Cell 6

This email will serve as documentation of the verbal approval to backfill Cell 3 and Cell 6. Verbal approval was granted May 18, 2004 and May 19, 2004 respectively.

Jerry Riggi

Jerry M Riggi
NYSDEC
Bureau of Hazardous Waste and Radiation Management
(518) 402-8575
jmrigger@gw.dec.state.ny.us

Attachment A
Page 1 of 1

GTES0003198

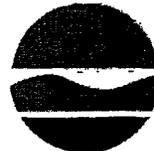
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

April 1, 2004

Jean Agostinelli, Project Manager
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Report, Spagnoli Road (SPAG2), March 24, 2004
Former Sylvania Electric Products Facility (FSEPF), #V00089-1

Dear Ms. Agostinelli:

I have read the Borrow Soils Report for Spagnoli Road dated March 24, 2004. Based on the results of your samples, the Department has no objections to you using these soils for backfill at the FSEPF site.

I have identified what I believe to be a typographical error in the notes for Table 4 (PCB results). In regard to the results by the Method 8082, it is stated, "Results reported in mg/kg or parts per billion (ppb)." Mg/kg should instead be "µg/kg". If I am incorrect, please notify me.

Sincerely,

Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi
J. Nealon, NYSDOH

Attachment B
Page 1 of 1

GTES0003199

Cell 3 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results

The survey unit, Cell 3, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 3 consists of all or portions of subcells U12 to U15, V12 to V15, and W12 to W15. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the floor VF sample results). See section 8.0 of the main report for additional details on the MARSSIM protocol.

This evaluation of Cell 3 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 48 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern. The sample results for each of the 48 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 3, (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 48 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 11 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is *information related to the performance of the Sign Test*. On page 4 of the report (Attachment page 11) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.11. As is explained in section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 3

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
14963	0.068 J	0.47	0.34
14964	0.174 J	0.48	0.44
14965	0.087 J	0.43	0.61
14966	0.164	0.51	0.56
14953	0.124 J	0.3	0.283
14954	0.12 J	0.226 J	0.266
14955	0.135 J	1.38	1.73
14956	0.3 J	0.199 J	0.235
15123	0.237	1.21	1.03
15124	0.18	3.47	3.53
15125	0.202	5.08	5
15126	0.094 J	3.77	4.21
15119	0.172	1.97	2.1
15120	0.147	0.84	0.72
15121	0.183	0.4	0.55
15122	0.101	0.12	0.139 J
14989	0.089 J	2.91	2.73
14991	0.057 J	2.78	2.49
14992	0.185 J	2.92	2.36
14993	0.202 J	4.16	2.87
15047	0.068 J	1.85	1.89
15048	0.117	0.216	0.242
15050	0.154	0.223	0.212
15051	0.156	0.52	0.46
15127	0.157	3.04	3.2
15128	0.079 J	0.54	0.45
15129	0.096 J	3.17	3.13
15130	0.168	2.09	2.04
15075	0.099 J	2.46	2.41
15076	0.148	1.05	0.95
15077	0.214	0.67	0.46
15078	0.227 J	3.61	3.07
14996	0.16 J	0.23 J	0.157
14998	0.164 J	0.76	0.77
14999	0.093 J	1.62	1.59
15001	0.101 J	2.17	2.21
15042	0.26 J	0.179 J	0.209
15043	0.43 J	0.52	0.6
15045	0.145 J	0.169 J	0.201
15046	0.46 J	0.225 J	0.196
15131	0.097 J	0.87	0.208
15132	0.111	0.124 J	0.099 J
15133	0.156	0.281	0.34
15134	0.145	5.06	4.97

Table C.1

Cell 3

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
15071	0.155	1.16	1.26
15072	0.152	0.19	0.238
15073	0.31	0.72	0.84
15074	0.164	1.1	0.95

Notes:

Cell area = 528 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

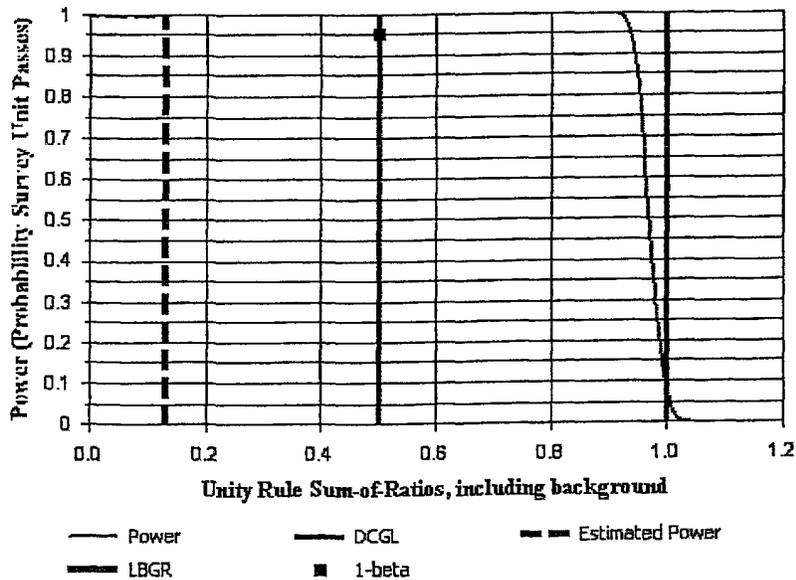


Surface Soil Survey Plan

Survey Plan Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 3 with STL Data
Comments:
Area (m²): 528 Classification: 1
Selected Test: Sign Estimated Sigma (SOR): 0.06
DCGL (SOR): 1 Sample Size (N): 13
LBGR (SOR): 0.5 Estimated Conc. (SOR): 0.13
Alpha: 0.050 Estimated Power: 1
Beta: 0.050 EMC Sample Size (N): 13
Scanning Instrumentation: 3" x 3" NaI collimated

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.2 \pm 0.1	N/A
U-234	1.5 \pm 1.5	N/A
U-238	1.5 \pm 1.5	N/A

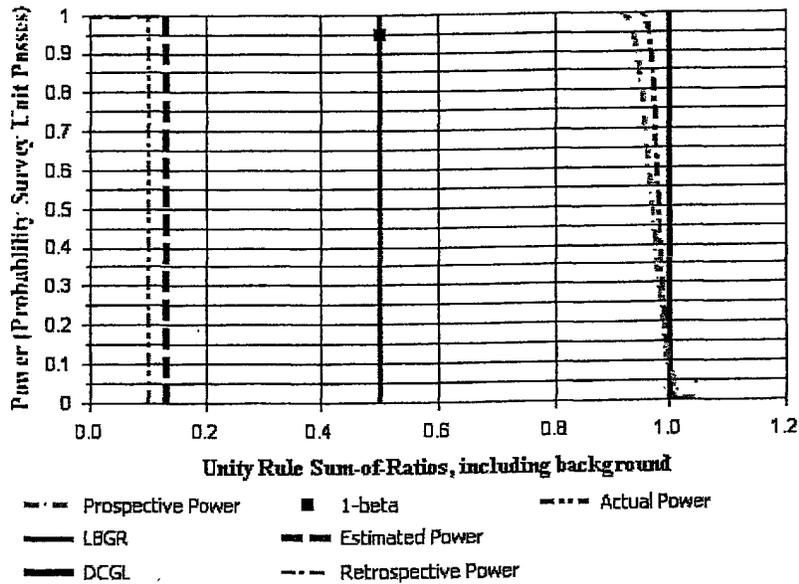


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 3 with STL Data
Report Number: 1
Survey Unit Samples: 48
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
14963	S	0.07	0.47	0.34
14964	S	0.17	0.48	0.44
14965	S	0.09	0.43	0.61
14966	S	0.16	0.51	0.56
14953	S	0.12	0.3	0.28
14954	S	0.12	0.23	0.27
14955	S	0.14	1.38	1.73
14956	S	0.3	0.2	0.24
15123	S	0.24	1.21	1.03
15124	S	0.18	3.47	3.53
15125	S	0.2	5.08	5
15126	S	0.09	3.77	4.21
15119	S	0.17	1.97	2.1
15120	S	0.15	0.84	0.72
15121	S	0.18	0.4	0.55
15122	S	0.1	0.12	0.14
14989	S	0.09	2.91	2.73
14991	S	0.06	2.78	2.49
14992	S	0.18	2.92	2.36
14993	S	0.2	4.16	2.87
15047	S	0.07	1.85	1.89
15048	S	0.12	0.22	0.24
15050	S	0.15	0.22	0.21
15051	S	0.16	0.52	0.46
15127	S	0.16	3.04	3.2
15128	S	0.08	0.54	0.45
15129	S	0.1	3.17	3.13
15130	S	0.17	2.09	2.04
15075	S	0.1	2.46	2.41
15076	S	0.15	1.05	0.95
15077	S	0.21	0.67	0.46
15078	S	0.23	3.61	3.07
14996	S	0.16	0.23	0.16
14998	S	0.16	0.76	0.77
14999	S	0.09	1.62	1.59
15001	S	0.1	2.17	2.21
15042	S	0.26	0.18	0.21
15043	S	0.43	0.52	0.6
15045	S	0.14	0.17	0.2
15046	S	0.46	0.22	0.2
15131	S	0.1	0.87	0.21
15132	S	0.11	0.12	0.1
15133	S	0.16	0.28	0.34
15134	S	0.14	5.06	4.97
15071	S	0.16	1.16	1.26
15072	S	0.15	0.19	0.24
15073	S	0.31	0.72	0.84
15074	S	0.16	1.1	0.95



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
14963	S	0.04
14964	S	0.08
14965	S	0.05
14966	S	0.08
14953	S	0.06
14954	S	0.05
14955	S	0.11
14956	S	0.12
15123	S	0.13
15124	S	0.2
15125	S	0.27
15126	S	0.19
15119	S	0.14
15120	S	0.08
15121	S	0.08
15122	S	0.04
14989	S	0.14
14991	S	0.13
14992	S	0.17
14993	S	0.21
15047	S	0.1
15048	S	0.05
15050	S	0.06
15051	S	0.08
15127	S	0.18
15128	S	0.05
15129	S	0.16
15130	S	0.14
15075	S	0.13
15076	S	0.09
15077	S	0.1
15078	S	0.21
14996	S	0.06
14998	S	0.09
14999	S	0.1
15001	S	0.12
15042	S	0.1
15043	S	0.18
15045	S	0.06
15046	S	0.17
15131	S	0.06
15132	S	0.04
15133	S	0.07
15134	S	0.25
15071	S	0.1
15072	S	0.06
15073	S	0.14
15074	S	0.1



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQD Results
Sample Number	48	N/A	N=13
Mean (SOR)	0.11	N/A	0.13
Median (SOR)	0.10	N/A	N/A
Std Dev (SOR)	0.06	N/A	0.06
High Value (SOR)	0.27	N/A	N/A
Low Value (SOR)	0.04	N/A	N/A

Cell 4 Status Report

INTRODUCTION

Cell 4 is comprised of subcells U16 to U23, V16 to V23, and W16 to W24. The cell is located on the east side of the 100 Property (Cell 4-Figure 1 and Figure 6 in Volume I). Excavation of Cell 4 was performed in two phases. The first phase involved the excavation of subcells U16 to U19, V16 to V19, and W16 to W19 and the second phase involved the excavation of subcells U20 to U23, V20 to V23, and W20 to W24. In order to support the two-phased excavation being performed at different periods, a sheet pile wall was driven along the border separating subcell rows 19 and 20 in Cell 4.

The first phase of the Cell 4 excavation began on August 4, 2003 and was completed on September 24, 2003. Verbal approval to backfill Cell 4, subcells U16 to U19, V16 to V19, and W16 to W19 was received from NYSDEC representatives on October 6, 2003 and documented in an e-mail the same day (Cell 4-Attachment A, page 1). A formal request to backfill Cell 4, subcells U16 to U19, V16 to V19, and W16 to W19 was submitted in a report to NYSDEC titled *Cell 4, Subcells U16 to 19, V16 to 19, and W16 to 19 – Attainment of Radiological and Chemical Cleanup Levels* dated November 20, 2003. The report describes the excavation activities and the results from radiological and chemical analyses of soil samples collected from the excavated surfaces. The analytical results demonstrated that the remaining soil surfaces following excavation of Cell 4, subcells U16 to 19, V16 to 19, and W16 to 19 attained the radiological cleanup levels and attained the chemical cleanup levels in subcells U16 to U19, V17 to V19 and W18 to W19. Residual chemical impacts above cleanup levels remained in subcells V16 and W16. NYSDEC was informed of the residual impacts and provided authorization to backfill.

The second phase of the Cell 4 excavation began on September 22, 2003 and was completed on October 9, 2003. Verbal approval to backfill Cell 4, subcells U20 to U23, V20 to V23, and W20 to W24 was received from NYSDEC representatives on October 15, 2003 and documented in an e-mail dated October 29, 2003 (Cell 4-Attachment A, page 2). A formal request to backfill Cell 4, subcells U20 to U23, V20 to V23, and W20 to W24 was submitted in a report to NYSDEC titled *Cell 4, Subcells U20 to 23, V20 to 23, and W20 to 24 and Cell 13, Subcell R24 – Attainment of Radiological and Chemical Cleanup Levels* dated November 20, 2003. (Subcell R24 is part of Cell 13 and is addressed in the Cell 13 Status Report.) The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces. The analytical results demonstrated that the remaining soil surfaces following excavation of Cell 4, subcells U20 to U23, V20 to V23, and W20 to W24 attained cleanup levels.

Cell 4 was also backfilled in two phases. The southern portion of the cell or subcells U20 to U23, V20 to V23, and W20 to W24 were backfilled first. Subcells U20 to U23, V20 to V23, and W20 to W24 were backfilled beginning October 21, 2003 and were completed on October 27, 2003. Subcells U16 to U19, V16 to V19, and W16 to W19 were backfilled beginning November 6, 2003 and were completed on January 13, 2004. The soils used for backfill of Cell 4 came from three different sources. Prior to use as backfill, the soils were surveyed for radiation and VOCs

using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at each of the three backfill sources. Survey and sample results were submitted to NYSDEC. Below is the designation for each backfill source and the date the survey and sample analytical results were submitted to NYSDEC.

Location	Date of Submittal
111 Pit North	October 17, 2003
Mercy Hospital	October 23, 2003
Spagnoli 1	December 20, 2003

Approval to use these soils was granted from NYSDEC in a letter dated October 27, 2003 for the 111 Pit North and Mercy Hospital sources and January 5, 2004 for the Spagnoli 1 source (Cell 4-Appendix B).

DEPTHS OF EXCAVATION

Cell 4 was excavated to depths ranging from 1 to 25 ft bgs. The deepest excavation depths were in the northern portion of the cell and became shallower as the excavation progressed south. The approximate excavation depths for each subcell are presented in Cell 4-Tables 1a and 1b and are shown on Cell 4-Figures 1a and 1b. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 20,346,750 pounds of soil and debris (991 Lift Liners™) were removed from Cell 4 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 4, various anomalies were encountered. The anomalies are primarily pieces of pipe and concrete from various structures. A list of Cell 4 anomalies along with sample results from anomaly samples is provided in Cell 4-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 4-Figures 2a and 2b. All of the anomalies encountered during the excavation activities in Cell 4 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed for each phase in Cell 4, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor, however, as can be seen on Cell 4-Figures 3a and 3b, 100% coverage could not be attained.

Each walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following each walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 4-Figures 4a and 4b depict CFD plots of the 1023 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 4-Figures 5a and 5b) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained is accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluation are provided in Cell 4-Appendix C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the exception of the D sample in subcells U20 and U21 due to their irregular shape. Due to the small area of subcells U22 and U23 (<25% of the area of a standard subcell), these subcells were sampled as part of subcells V22 and V23, respectively. Also, as less than 25% of subcell W24 was excavated, it was considered part of subcell W23 for sampling purposes.

In addition to the floor samples described above, an additional 28 VF samples were collected from the walls or at the joint of a wall and floor created within the cell due to the excavation to different depths within the cell (Cell 4-Figure 6).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

SYSTEMATIC SOIL SAMPLING

Additional soil borings were conducted following the Phase I soil remediation. Some constituents were found above the cleanup levels below the design engineering limits and are reported in Table 3 of *Subsurface Soil Sampling and Analysis Report, Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation*, Rev 1: October 2005. This report was submitted separately to NYSDEC.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 4-Table 3 and are shown on Cell 4-Figures 5a and 5b. The radiological, PCE, TCE, and nickel results for STL analyses of the VF wall samples are provided in Cell 4-Table 5 and are shown on Cell 4-Figure 6. Cell 4-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF samples. All radiological sample results were less than the Site cleanup levels. All chemical sample results were less than the Site cleanup levels except for two floor samples detailed below:

Sample ID 05323, subcell V 16, PCE = 9.8 mg/kg (24.9 ft bgs); and
Sample ID 05276, subcell W16, PCE = 400 mg/kg (24.0 ft bgs).

The radiological results for verification sampling of the excavation floor were evaluated in accordance with MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 4, passed this evaluation (Cell 4-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Some residual VOCs remain above the cleanup levels in certain subcells of Cell 4. Based on verification sample STL analytical results, the radiological Site cleanup levels were attained for Cell 4.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 4-Table 1a:	Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Excavation Depths
Cell 4-Table 1b:	Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W24) Excavation Depths
Cell 4-Table 2:	Cell 4 Anomaly Sample Results
Cell 4-Table 3:	Cell 4 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 4-Table 4:	Cell 4 Maximum Verification Floor and Wall Sample Results Severn Trent Laboratories, Inc.
Cell 4-Table 5:	Cell 4 Summary of Verification Wall Sample Results Severn Trent Laboratories, Inc.

Figures

Cell 4-Figure 1a:	Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Excavation Depth Contours
Cell 4-Figure 1b:	Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W24) Excavation Depth Contours
Cell 4-Figure 2a:	Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Anomalies
Cell 4-Figure 2b:	Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W24) Anomalies
Cell 4-Figure 3a:	Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Post-Excavation Gamma Radiation Walkover Survey Results
Cell 4-Figure 3b:	Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W24) Post-Excavation Gamma Radiation Walkover Survey Results
Cell 4-Figure 4a:	Cumulative Frequency Distribution for Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Gamma Radiation Walkover Survey Data
Cell 4-Figure 4b:	Cumulative Frequency Distribution for Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W24) Gamma Radiation Walkover Survey Data
Cell 4-Figure 5a:	Cell 4 (Subcells U16 to U19, V16 to V19, and W16 to W19) Verification Floor Sample Locations and Results
Cell 4-Figure 5b:	Cell 4 (Subcells U20 to U23, V20 to V23, and W20 to W23) Verification Floor Sample Locations and Results
Cell 4-Figure 6:	Cell 4 Verification Wall Sample Locations and Results

Attachments

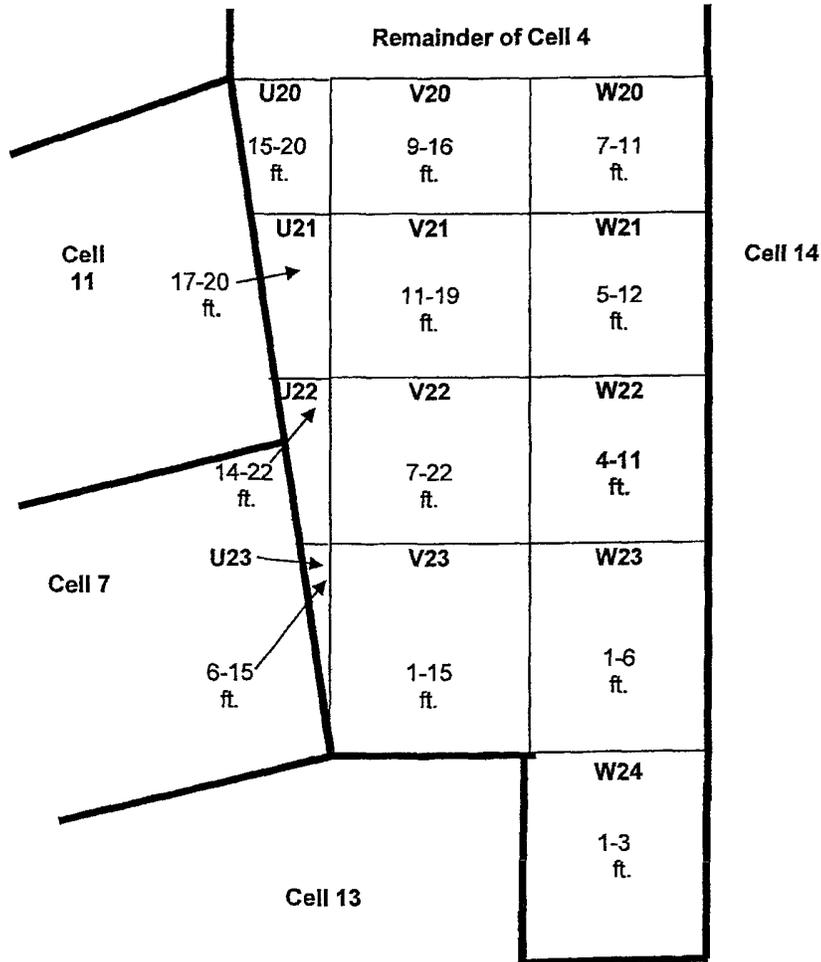
Cell 4-Attachment A:	E-Mails from NYSDEC to GTEOSI dated October 6, 2003 and October 29, 2003
Cell 4-Attachment B:	Letters from NYSDEC to GTEOSI dated October 27, 2003 and January 5, 2004
Cell 4-Attachment C:	Cell 4 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 4 -Table 1a
(Subcells U16 to U19, V16 to V19, and W16 to W19)
Excavation Depths**

	Cell 3			
	U16	V16	W16	
	23-25 ft.	24-25 ft.	24-25 ft.	
Cell 12	U17	V17	W17	Cell 14
	23-24 ft.	24-25 ft.	24-25 ft.	
	U18	V18	W18	
	23-24 ft.	23-24 ft.	22-24 ft.	
	U19	V19	W19	
Cell 11	21-23 ft.	21-23 ft.	21-22 ft.	
	Remainder of Cell 4			

Notes:
Excavation depths are approximate.
— Subcell Boundary
— Cell Boundary

**Cell 4 -Table 1b
(Subcells U20 to U23, V20 to V23, and W20 to W24)
Excavation Depths**



Notes:
Excavation depths are approximate.
— Subcell Boundary
— Cell Boundary

Cell 4-Table 2
Anomaly Sample Results

Sample ID	Date	Location	Material	Depth (ft)	Moisture (%)	Temperature (°F)	Specific Gravity	Unit Weight (pcf)	Void Ratio	Compaction Method	Notes				
Pipe	8/28/2003	E-828	W17	1.5' (dia.)	Plastic	2	1.14	NA	0.89	10.83	31,301	186	0.311	0.052 U	NS
Pipe	NS	F-827	W17	2' (dia.)	Plastic	3 (ext.)	NS	NS	NS	NS	25,000	<MDA	NS	NS	NS
Block	8/28/2003	L-826	W16	2', (L) 2', (W)	Block	16	2.39	NA	86.86	1268.87	590,000	NS	703,520 U	4,084	NS
Drum Remnants	8/20/2003	J-820	V18	3', (L) 2.5' (dia.)	Metal	8	1.76 J	NA	11.35 J	273.01 J	500,000	NS	0.284	0.090 U	NS
Trunk Remnants	8/20/2003	K-805	U16	na	Metal	6	2.33	NA	2.81	46.66	26,000	NS	0.125 U	0.125 U	NS
Concrete Structure	8/22/2003	N-812	U16/U18/U17	10' x 16'	Concrete	10	2.82	NA	19.82	481.27	60,750	NS	3.690	0.291	NS
Concrete Structure	8/20/2003	N-828	U16	10' (L) 18 in. (W) 6' (H)	Concrete	11	1.21	NA	0.87	16.88	NS	NS	4.5	0.18 U	1.876 J
Concrete Structure	8/20/2003	N-828	U16	10' (L) 18 in. (W) 6' (H)	Concrete	12.5	0.46	NA	0.32	4.86	NS	NS	0.0012 J	0.0028 U	2.5 J
Concrete Structure	8/20/2003	N-828	U16	10' (L) 18 in. (W) 6' (H)	Concrete	11	1.09	16.8	1.07	16.4	NS	NS	8.7	0.067	69.3 J
Concrete Structure	8/20/2003	N-828	V18	10' (L) 18 in. (W) 6' (H)	Concrete	12	0.37	NA	0.35	4.89 J	NS	NS	0.0028 J	0.0028 U	1.8 J
Concrete Structure	8/20/2003	N-828	U16	10' (L) 18 in. (W) 6' (H)	Concrete	12	0.46	NA	0.29	6.16	NS	NS	0.0028 U	0.0028 U	1.1 J
Concrete Structure	8/20/2003	N-828	U16	10' (L) 18 in. (W) 6' (H)	Concrete	12.5	<0.09	NA	0.87	11.04	NS	NS	0.0028 J	0.0028 U	1.2 J
Concrete Structure (cont.)	8/20/2003	N-828	V17	10' (L) 18 in. (W) 6' (H)	Concrete	12	0.18	NA	0.17 J	4.04 J	NS	NS	0.0078 J	0.14 J	1.5 J
Concrete Structure (cont.)	8/20/2003	N-828	U17	10' (L) 18 in. (W) 6' (H)	Concrete	10	0.36	NA	0.17	< 2.65	NS	NS	0.015 J	0.0028 U	1.5 J
Concrete Structure (cont.)	8/20/2003	N-812	V18/U17	10' (L) 18 in. (W) 6' (H)	Concrete	10	0.26	NA	0.26	< 3.07	NS	NS	0.0016 J	0.0028 U	3.0 J
Concrete Structure (cont.)	8/20/2003	N-812	U18/U17	10' (L) 18 in. (W) 6' (H)	Concrete	10	0.32	NA	0.27	< 2.85	NS	NS	2.4	0.04	11.8
Concrete Structure (cont.)	8/20/2003	N-828	U17	10' (L) 18 in. (W) 6' (H)	Concrete	10	2.16	NA	3.79	77.96 J	NS	NS	3.412	0.088 U	NS
Concrete Structure (cont.)	8/4/2003	N-828	U17	10' (L) 18 in. (W) 6' (H)	Concrete	10	1.86	NA	8.30	146.18	NS	NS	2.8	0.32 U	71.90
Pipe	NS	O-811	V16	6' (dia.)	Metal (Cast Iron)	NS	NS	NS	NS	NS	8KGD	NS	NS	NS	NS

Cell 4-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U16	A	05314	23.3	0.18 J	1.72	1.46			
U16	B	06016	25.0	1.11	3.03	2.69	0.0026 U	0.00025 J	1.1 J
U16	C	05316	23.4	0.15 J	0.57 J	0.40 J			
U16	D	05317	23.3	0.32 J	1.38 J	1.26			
U17	A	05318	23.9	0.17 J	0.52 J	0.47 J			
U17	B	05319	23.4	0.085 J	2.13	2.13	0.0025 U	0.0028	2.5 J
U17	C	05320	23.3	0.16 J	0.48 J	0.53 J			
U17	D	05321	23.7	0.17 J	0.45 J	0.33 J			
U18	A	05188	23.6	0.185 J	4.15 J	4.47 J			
U18	B	05189	23.9	0.161 J	2.94	3.29			
U18	C	05191	23.4	0.15 J	3.73 J	3.71 J			
U18	D	05187	23.1	0.25 J	4.03	3.85	0.0025 U	0.0025 U	1.4 J
U19	A	05175	22.4	0.17 J	1.01	0.93	0.0025 U	0.0025 U	1.7 J
U19	B	05176	22.1	0.34 J	0.63 J	0.54 J			
U19	C	05177	21.2	0.22 J	0.91 J	0.88			
U19	D	05178	21.6	0.080 U	2.94	2.89			
U20	A	05677	18.4	0.45	2.62	2.31			
U20	B	05678	19.1	0.51	2.21	2.03	0.00063 J	0.00045 J	3.1 J
U20	C	05679	14.9	0.45	4.94	4.66			
U21	A	05707	16.9	0.19 J	5.80	6.18			
U21	B	05709	17.0	2.80	3.51	2.97	0.0026 U	0.0026 U	2.4 J
U21	C	05710	20.1	0.22 J	3.42	2.83			
V16	A	05322	24.2	0.19 J	0.37 J	0.28 J			
V16	B	05323	24.9	0.22 J	0.32 J	0.27 J	0.250 U	9.8	4.1 U
V16	C	05324	24.1	0.29 J	0.54 J	0.32 J			
V16	D	05325	23.6	0.25 J	0.44 J	0.36 J			
V17	A	05326	23.9	0.15 J	0.62 J	0.54 J			
V17	B	05327	24.6	0.31 J	0.54 J	0.56 J	0.00097 J	0.016	4.1 U
V17	C	05328	24.3	0.24 J	0.39 J	0.23 J			
V17	D	05329	23.9	0.15 J	0.69 J	0.58 J			
V18	A	05194	23.7	0.11 U	2.50	2.75			
V18	B	05195	23.7	0.26 J	0.39 J	0.32 J			
V18	C	05192	23.2	0.22 J	1.14 J	1.29 J	0.0077	0.00050 J	0.76 J
V18	D	05196	23.9	0.25 J	3.28	3.33			
V19	A	05180	22.6	0.145 J	2.71	2.67			
V19	B	05181	22.0	0.23 J	3.63	3.81			
V19	C	05179	21.3	0.129 J	2.37	2.21	0.00035 J	0.0020 J	2.7 J
V19	D	05182	22.0	0.22 J	1.36	1.27			
V20	A	05655	11.4	0.27 J	0.89 J	0.44 J			
V20	B	05656	11.2	0.41	0.92 J	0.82 J	0.0026 U	0.0026 U	3.8 J
V20	C	05658	10.8	0.21 J	5.04	4.79			
V20	D	05659	11.5	0.31 J	0.47 J	0.79			
V21	A	05697	15.6	0.40	4.92	5.11	0.0056	0.0033	3.4 J
V21	B	05700	13.5	0.65	6.87	6.74			
V21	C	05701	17.1	0.40 J	7.14	6.41			
V21	D	05702	15.8	0.19 J	7.88	8.58			
V22	A	05579	21.3	0.88	6.67	6.39			
V22	B	05580	17.4	0.54	4.55	4.27			
V22	C	05581	17.4	0.183 J	6.82 J	6.35 J			

Cell 4-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V22	D	05582	22.5	0.30 J	3.71	2.96	0.0025 U	0.0025 U	2.1 J
V23	A	05391	5.4	0.43	0.84 J	0.73 J			
V23	B	05392	5.0	0.78	3.19	2.64	0.0025 U	0.0025 U	2.1 J
V23	C	05393	4.8	0.36 J	3.91	4.28			
V23	D	05394	5.3	0.91	0.52 J	0.50 J			
W16	A	05278	24.7	0.24 J	0.51 J	0.49 J			
W16	B	05279	24.7	0.21 J	2.18	2.15			
W16	C	05277	24.8	0.24 J	0.48 J	0.26 J			
W16	D	05276	24.0	0.22 J	3.48	3.53	13 U	400	1.8 J
W17	A	05270	25.0	0.148 J	0.38 J	0.28 J			
W17	B	05271	24.7	0.144 J	0.48 J	0.32 J			
W17	C	05272	25.2	0.20 J	0.37 J	0.50 J			
W17	D	05273	24.9	0.25 J	0.77 J	0.54 J	0.0025 U	0.016	0.97 J
W18	A	05198	22.0	0.27 J	1.01 J	0.79 J			
W18	B	05199	22.0	0.33 J	0.54 J	0.43 J			
W18	C	05197	22.1	0.20 J	0.91 J	1.03	0.0017 J	0.00086 J	1.0 J
W18	D	05200	22.7	0.157 J	0.48 J	0.42 J			
W19	A	05184	22.1	0.18 J	2.33	2.32			
W19	B	05185	21.7	0.18 J	1.50 J	1.20			
W19	C	05186	21.6	0.29 J	0.38 J	0.36 J			
W19	D	05183	22.1	0.146 J	1.0	1.0	0.00069 J	0.0025 U	1.1 J
W20	A	05610	7.4	0.86	4.95	4.07			
W20	B	05612	7.6	0.61	1.65	1.50			
W20	C	05613	9.3	0.53	3.42	3.47			
W20	D	05615	8.2	0.40	1.58	1.34	0.00044 J	0.0025 UJ	3.3 J
W21	A	05616	9.9	0.61	3.15 J	2.86 J			
W21	B	05617	5.4	0.62	0.48 J	0.55	0.0025 U	0.0025 U	2.9 J
W21	C	05618	7.1	0.23 J	6.31	6.49			
W21	D	05619	10.8	0.22 J	2.76	2.82			
W22	A	05568	4.5	0.50	1.27	1.22			
W22	B	05569	4.5	0.64	1.34	1.07			
W22	C	05570	4.6	0.96	1.0 J	0.91			
W22	D	05571	5.3	0.90	3.73	3.62	0.0025 U	0.0025 U	2.7 J
W23	A	05386	5.2	0.61	1.90	1.77			
W23	B	05387	6.2	0.74	2.12	2.12	0.0025 U	0.0025 U	0.90 J
W23	C	05389	5.0	0.34 J	1.90	1.75			
W23	D	05390	5.1	0.74	1.88	1.95			

Cell 4-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 4-Figure 5a and Cell 4-Figure 5b for sample ids and associated locations.

Blank cell indicates analysis was not performed.

Cell 4-Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Type	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	Floor	2.8	17.0	U21
	Wall	2.04	8.8	V20
Maximum U-234 (pCi/g)	Floor	7.88	15.8	V21
	Wall	34.1	8.6	W22
Maximum U-238 (pCi/g)	Floor	8.58	15.8	V21
	Wall	34.5	8.6	W22
Maximum TCE (mg/kg)	Floor	* 0.0077	23.2	V18
	Wall	0.0071	17.6	V22
Maximum PCE (mg/kg)	Floor	400	24.0	W16
	Wall	0.024	17.6	V22
Maximum Ni (mg/kg)	Floor	3.8 J	11.2	V20
	Wall	13.2	0.3	W24

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

* - Sample 05276 (subcell W16, Figure 5a) has a reported TCE concentration of 13 U. This sample was not listed in Table 4 because of an elevated reporting limit due to the detected PCE in this sample and the fact that sample 05276 was performed on a 100-fold dilution of the aliquot.

Cell 4-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U20	05683	18.9	0.25 J	3.03	2.98	0.0029	0.0011 J	2.1 J
U20	05680	19.0	0.087 J	0.49 J	0.42	0.0026 U	0.00064 J	3.3 J
U22	05597	23.0	0.28 J	2.98	2.99	0.00031 J	0.0025 U	0.64 J
V20	05662	8.6	0.90	0.87 J	0.68	0.0026 U	0.0026 U	2.4 J
V20	05664	8.8	2.04	3.04	2.41	0.00056 J	0.00037 J	3.0 J
V20	05663	11.0	0.28 J	3.48	3.51	0.0025 U	0.0025 U	2.1 J
V20	05661	11.3	0.94	0.53 J	0.73	0.0026 U	0.0026 U	8.9
V20	05682	13.1	0.44	1.15 J	0.78	0.00031 J	0.0025 U	2.0 J
V21	05705	10.0	0.38 J	3.59	3.88	0.00042 J	0.0025 U	4.1 U
V21	05704	12.9	0.26 J	2.91	2.88	0.0038	0.0081	3.0 J
V21	05703	16.1	0.14 U	2.56	2.93	0.00073 J	0.00022 J	2.3 J
V22	05592	14.9	0.25 J	9.41	8.96	0.00061 J	0.0026 U	1.3 J
V22	05607	17.2	0.47	6.30	5.84	0.0026 U	0.0026 U	2.0 J
V22	05591	17.6	0.35 J	1.99	1.94	0.0071	0.024	1.4 J
V22	05598	19.8	0.40	2.27	1.92	0.00022 J	0.0025 U	0.87 J
V22	05603	19.9	0.26 J	2.66	2.21	0.0025 U	0.0025 U	0.21 J
V22	05590	21.0	0.28 J	6.34 J	5.28 J	0.0026 U	0.0026 U	0.94 J
V22	05601	22.6	0.41	5.12	4.25	0.0026 U	0.0026 U	0.45 J
V23	05608	7.9	0.55	19.0	17.6	0.0055	0.0035	11.3
V23	05600	8.3	1.05	11.8	9.79	0.0044	0.00088 J	7.4
V23	05395	4.3	0.26 J	0.44 J	0.30 J	0.0026 U	0.0026 U	1.7 J
W21	05578	11.3	0.076 U	5.54	5.75	0.0025 U	0.0025 U	5.9
W22	05573	5.9	0.66 J	4.39 J	3.84 J	0.0025 U	0.0025 U	4.4
W22	05575	8.6	0.68	34.1	34.5	0.0016 J	0.00029 J	11.1
W24	05397	0.3	0.72	4.87	4.56	0.0026 U	0.00084 J	13.2
W24	05399	1.0	0.58	3.79	4.12	0.0027 U	0.0016 J	11.1
W24	05398	3.8	0.40	0.81 J	0.70 J	0.0026 U	0.0026 U	4.7
W24	05396	4.0	0.197 J	1.72	1.92	0.0025 UJ	0.00048 J	4.8

Analytes:

Th-232 - Thorium-232	TCE - Trichloroethene
U-234 - Uranium-234	PCE - Tetrachloroethene
U-238 - Uranium-238	Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is consider

Notes:

See Cell 4-Figure 6 for sample ids and associated locations.
Blank cell indicates analysis was not performed.



Cell 4-Figure 1b
 (Subcells U20 to U23,
 V20 to V23, and W20 to W24)
 Excavation Depth Contours

Legend

-  Property Line
-  Subcell Boundaries
-  Cell Boundaries

Excavation Depths
 (feet below ground surface)

-  0.0 - 7.0
-  7.1 - 11.0
-  11.1 - 15.0
-  15.1 - 19.0
-  19.1 - 23.0

Note: Excavation depths are approximate



Feet
 0 5 10

Projection: UTM
 Spheroid: Everest
 Datum: Everest
 Units: Meter
 North Arrow: True

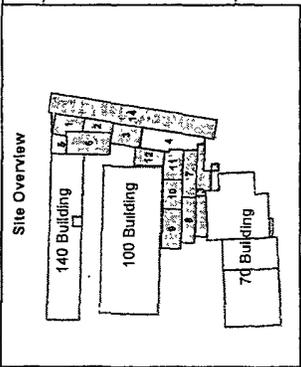
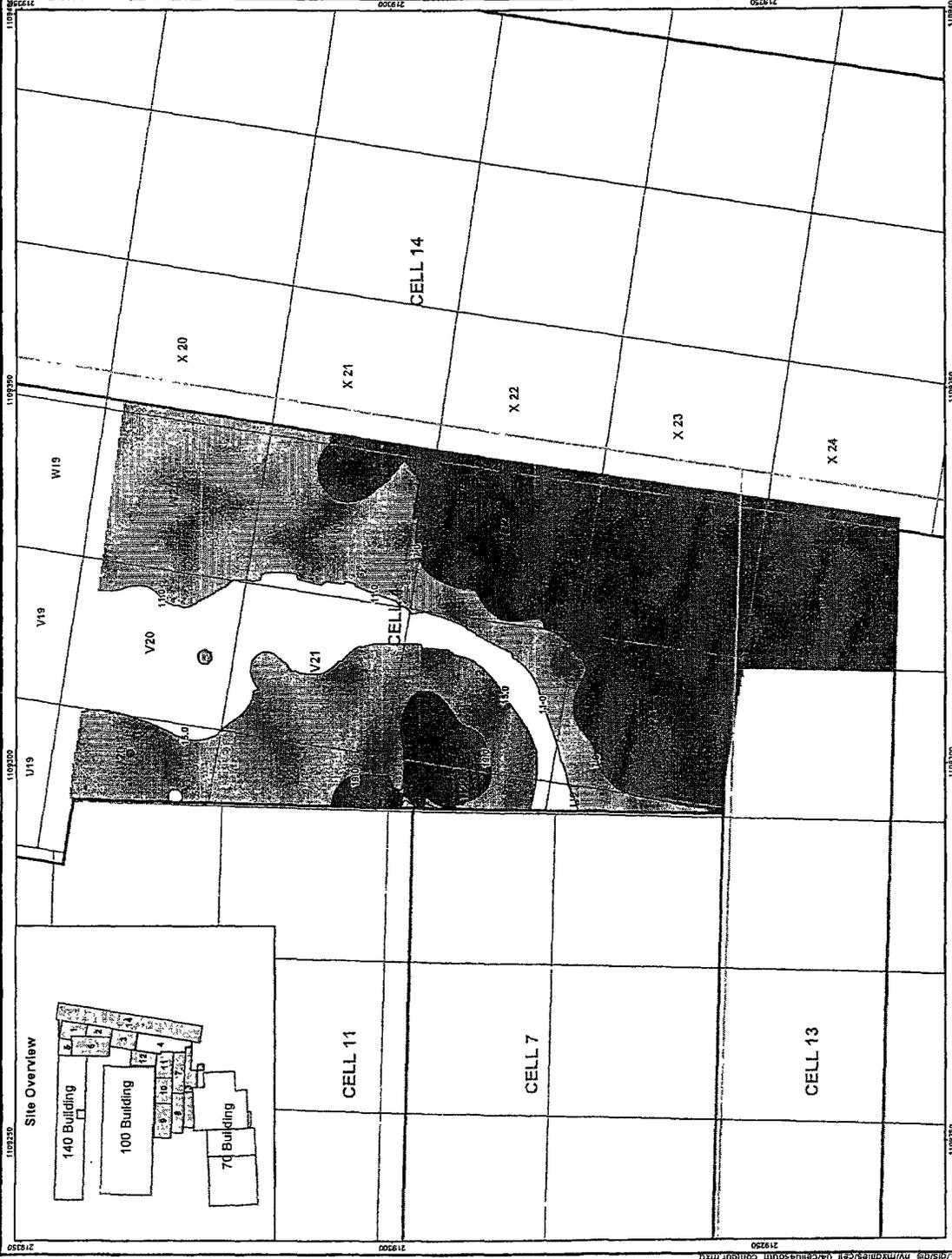
UTM84E:V02085.1 URS27010-019

GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



DESTINY
 RESOURCES, INC.

December 21, 2006
 DRI ID: 1006.H5298



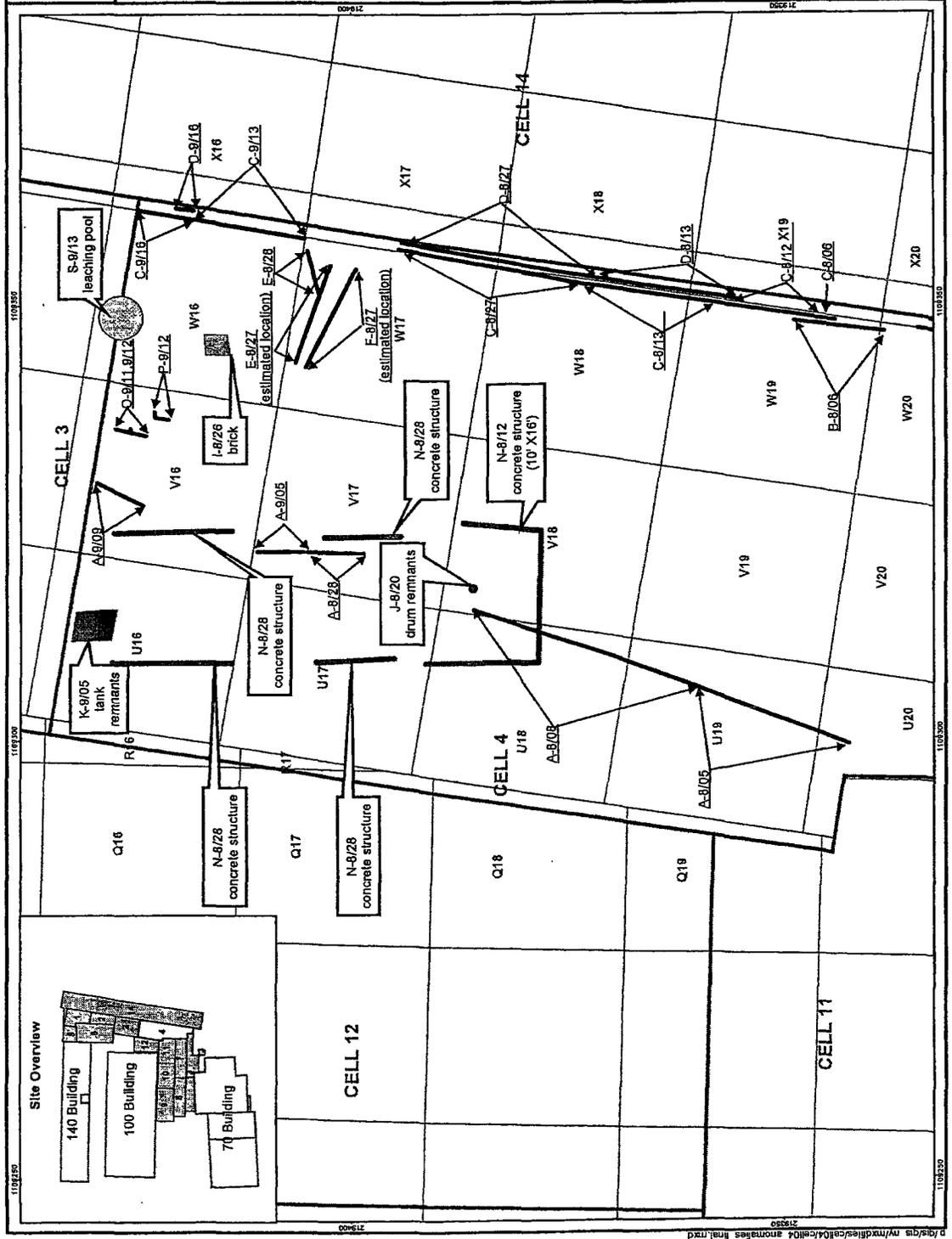
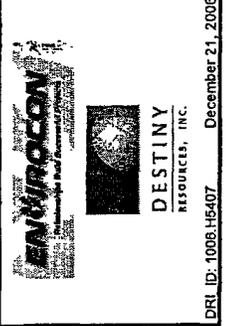
Cell 4-Figure 2a
(Subcells U16 to U19,
V16 to V19, and W16 to W19)
Anomalies

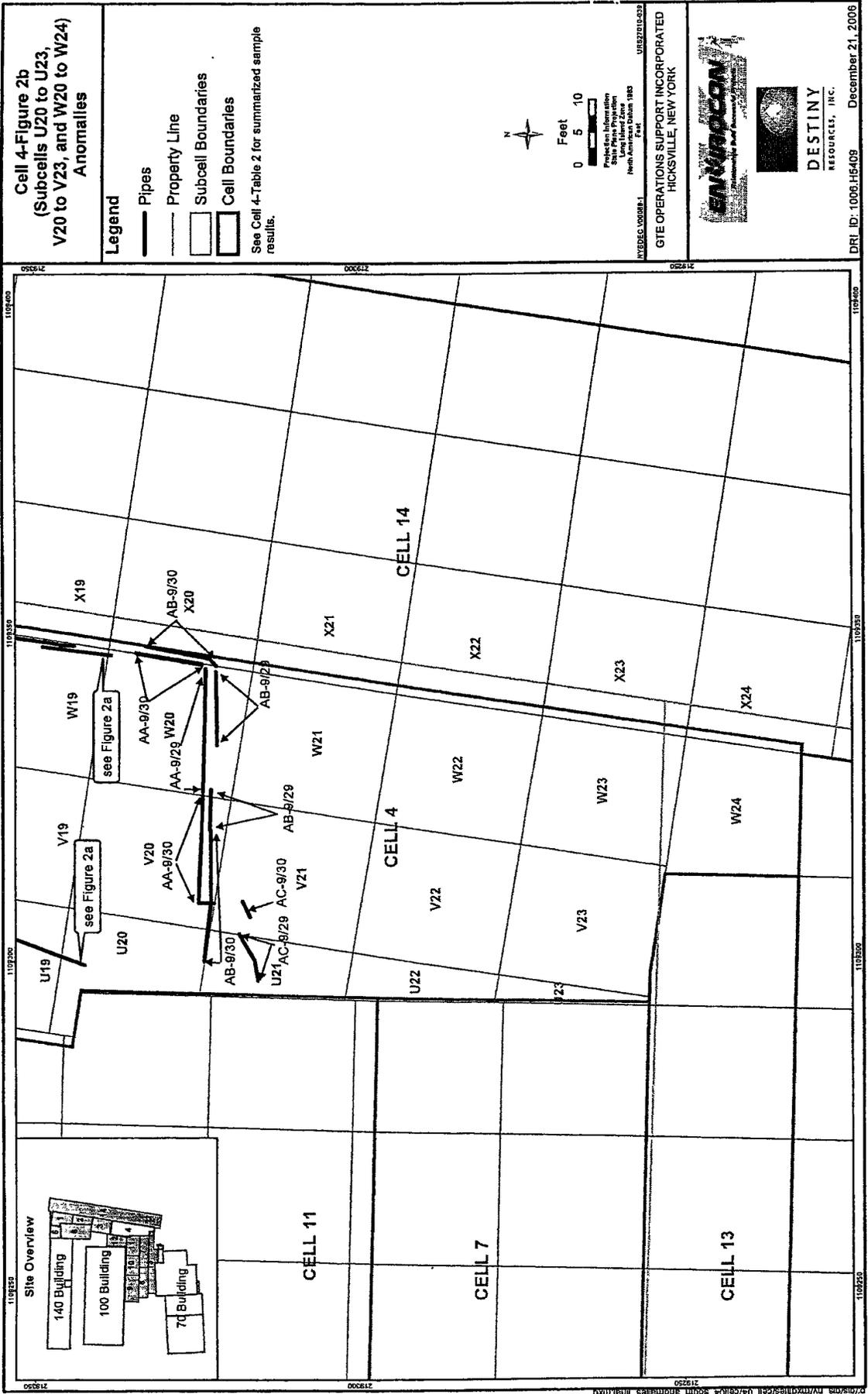
- Legend**
- Drum Remnant
 - Pipes
 - ▬ Concrete Structure
 - Property Line
 - ▨ Brick
 - ▨ Leaching Pool
 - ▬ Tank Remnant
 - ▬ Subcell Boundaries
 - ▬ Cell Boundaries
- See Cell 4-Table 2 for summarized sample results.

UR22016-03B
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

UR22016-03B
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

Scale: 1" = 100 Feet
 North Arrow
 UTM Zone 18N
 North American Datum 1983





Cell 4-Figure 3a
 (Subcells U16 to U19,
 V16 to V19, and W16 to W19)
 Post-Excavation Gamma
 Radiation Walkover Survey Results

Legend

- Lower Population - 85% of data points (0 - 3685 cpm)
- Middle Population - 10% of data points (3686 - 3857 cpm)
- Upper Population - 4% of data points (3858 - 4410 cpm)

— Property Line
 □ Subcell Boundaries
 □ Cell Boundaries

Feet
 0 5 10

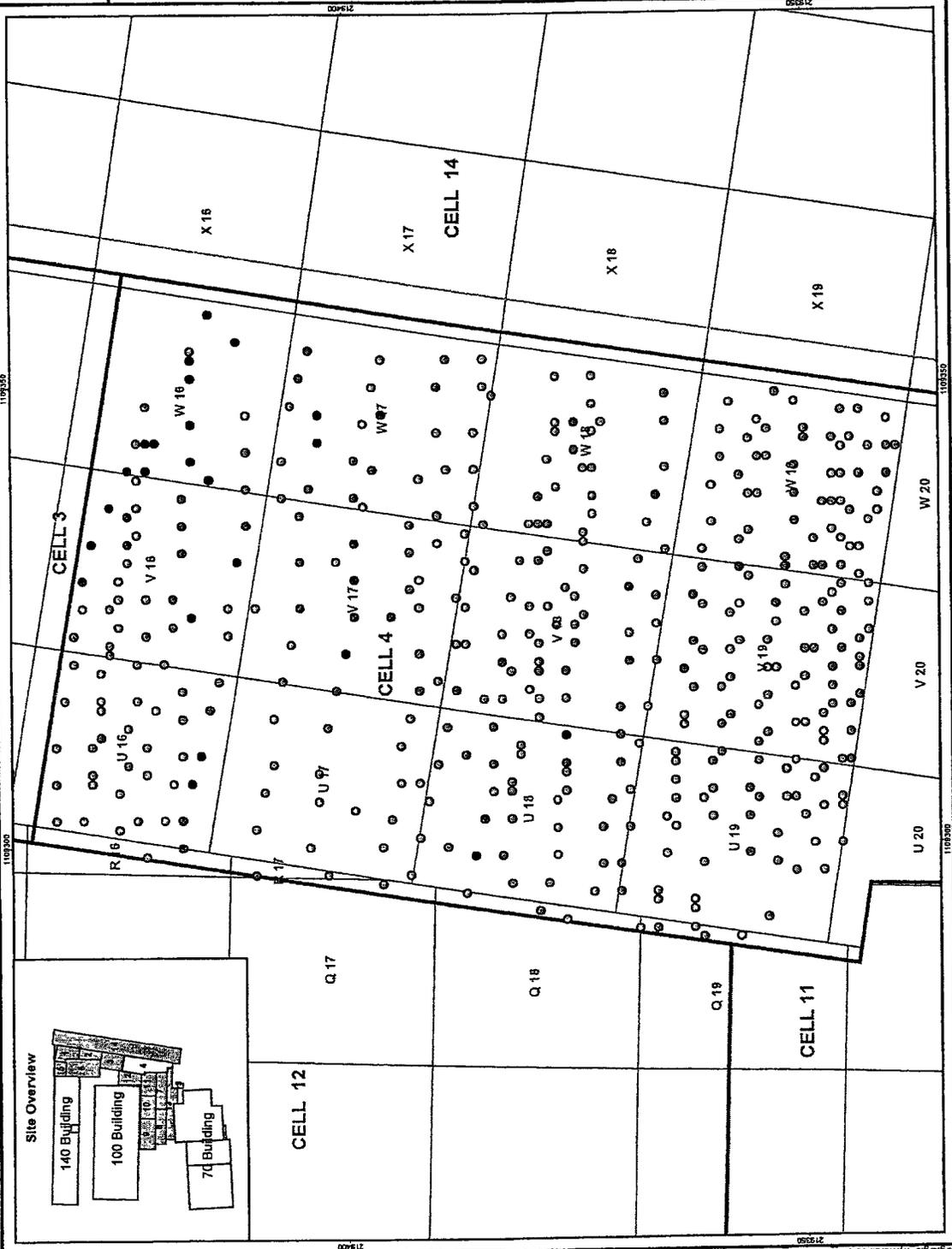
Project Information
 Site: Long Island ZONE
 North American Datum 1983
 URB27016-003

URS
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

ENVIRONMENTAL
 Technology and Resource
 SOLUTIONS

DESTINY
 RESOURCES, INC.

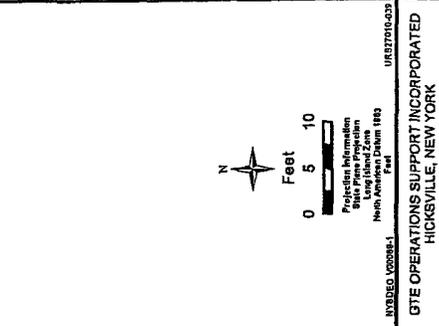
DRI_ID: 1006.H6275 December 21, 2006





Cell 4-Figure 3b
 (Subcells U20 to U23,
 V20 to V23, and W20 to W24)
 Post-Excavation Gamma
 Radiation Walkover Survey Results

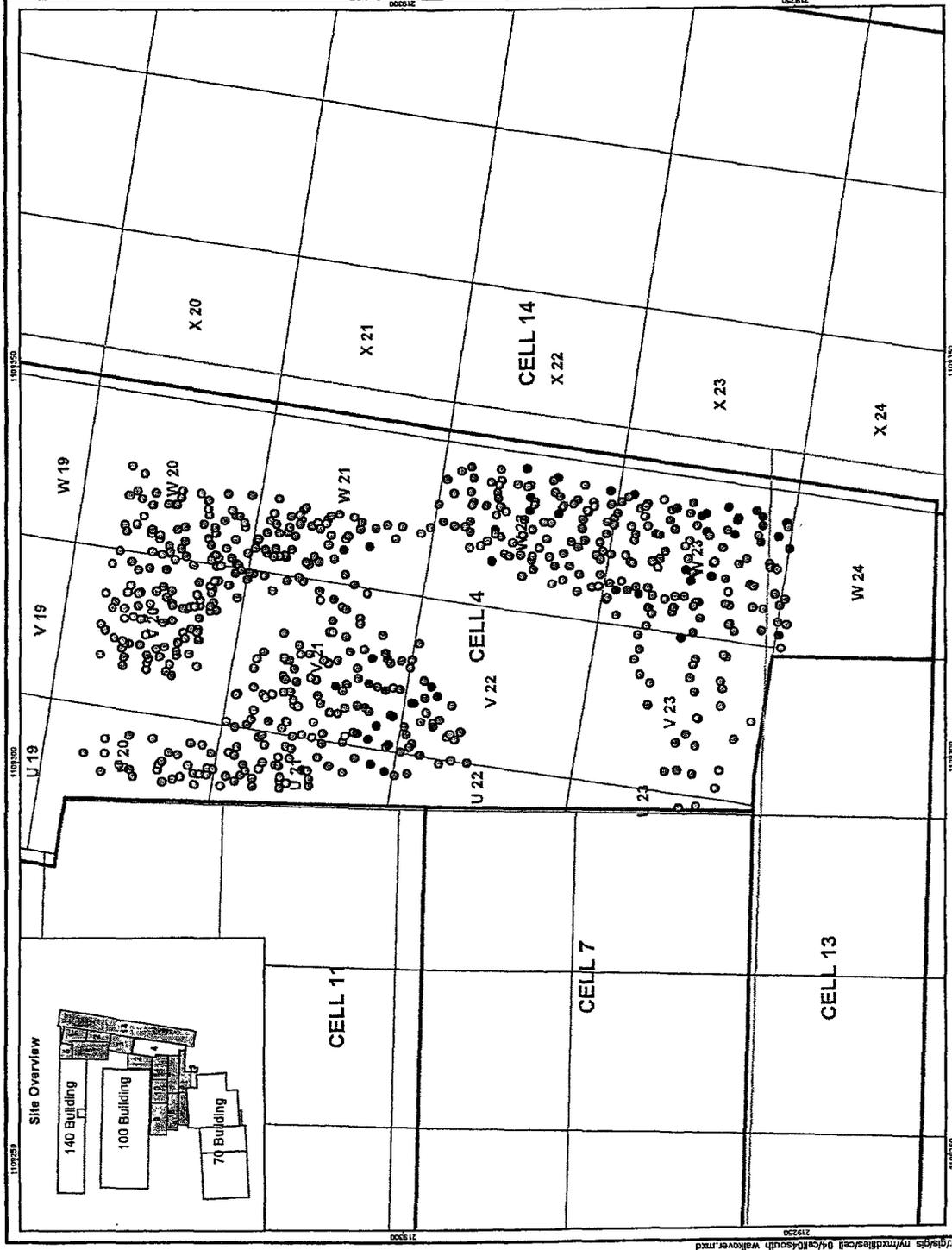
- Legend**
- Lower Population - 20% of data points (0 - 4271 cpm)
 - Middle Population - 65% of data points (4272 - 5303 cpm)
 - Upper Population - 9% of data points (5304 - 6453 cpm)
-  Property Line
 Subcell Boundaries
 Cell Boundaries



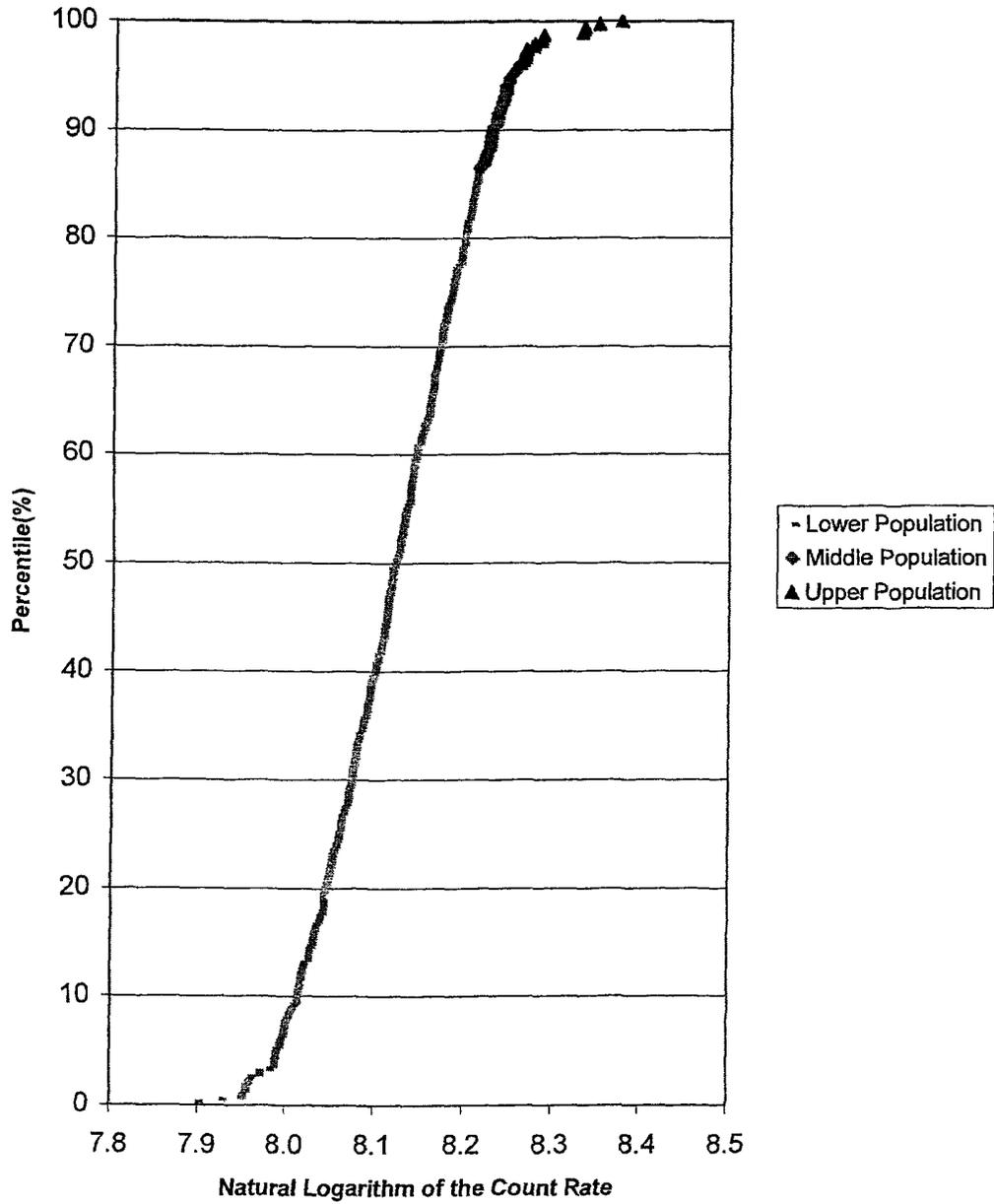
NYDEG.V00086.1
 UR827016.029
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



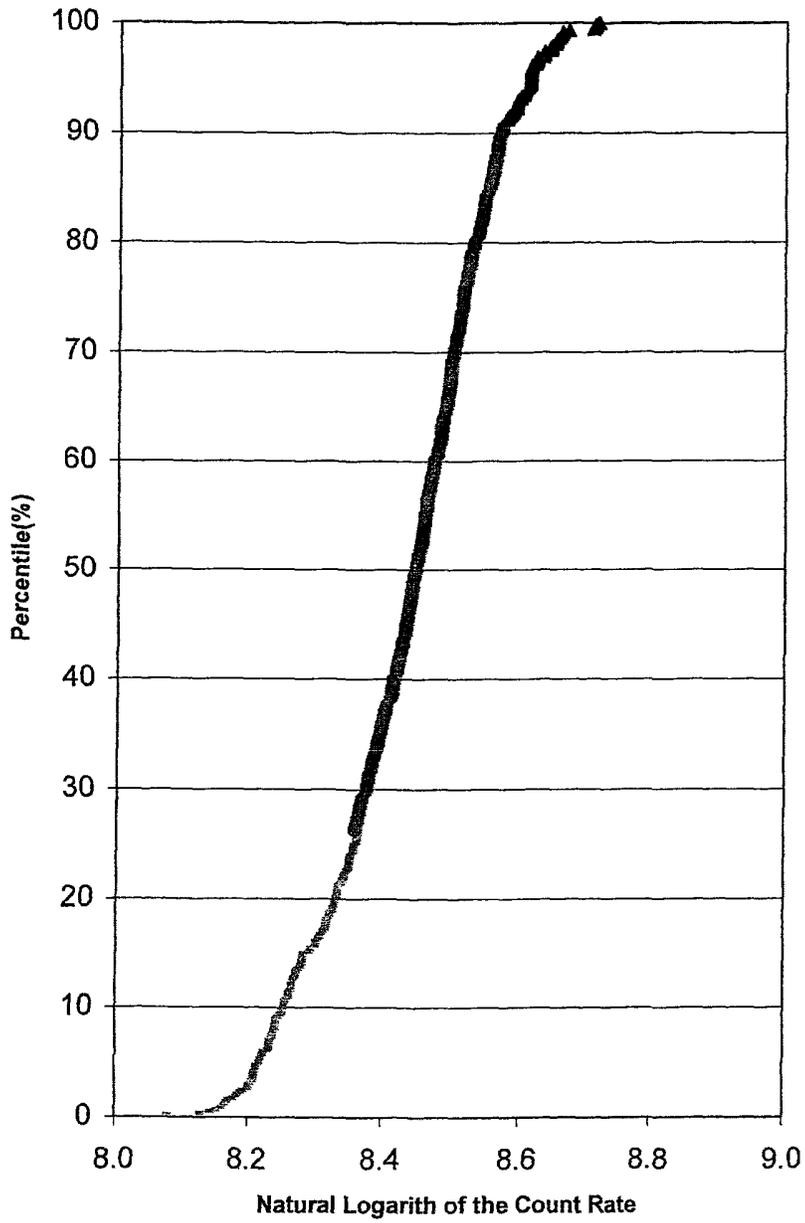

DRI_ID: 1006.H6302 December 21, 2006

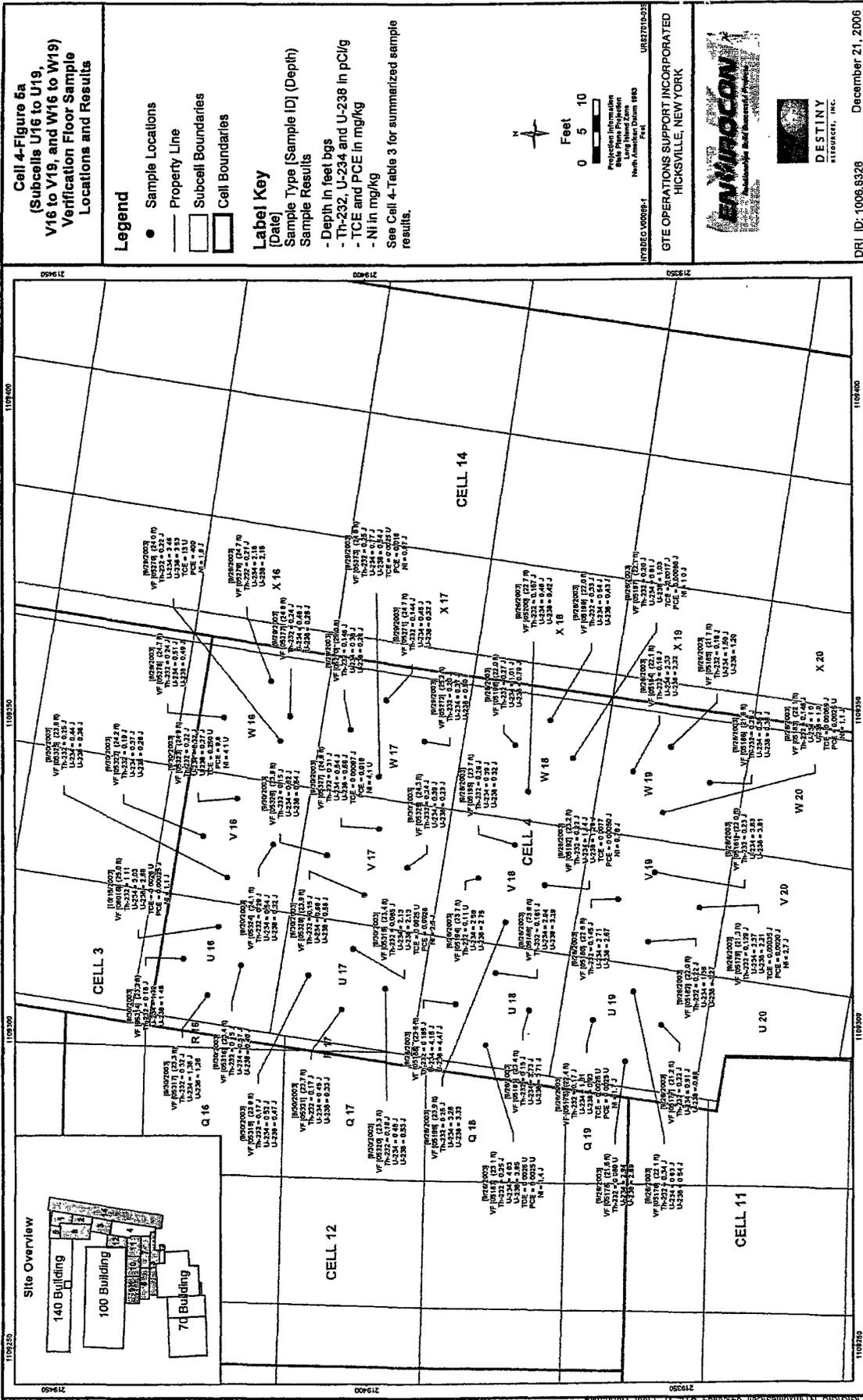


Cell 4-Figure 4a
Cumulative Frequency Distribution for
(Subcells U16 to U19, V16 to V19, and W16 to W19)
Gamma Radiation Walkover Survey Data



Cell 4-Figure 4b
Cumulative Frequency Distribution for
(Subcells U20 to U23, V20 to V23, and W20 to W24)
Gamma Radiation Walkover Survey Data





Cell 4-Figure 6a
 (Subcells U16 to U19,
 V16 to V19, and W16 to W19)
 Verification Floor Sample
 Locations and Results

- Legend**
- Sample Locations
 - Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

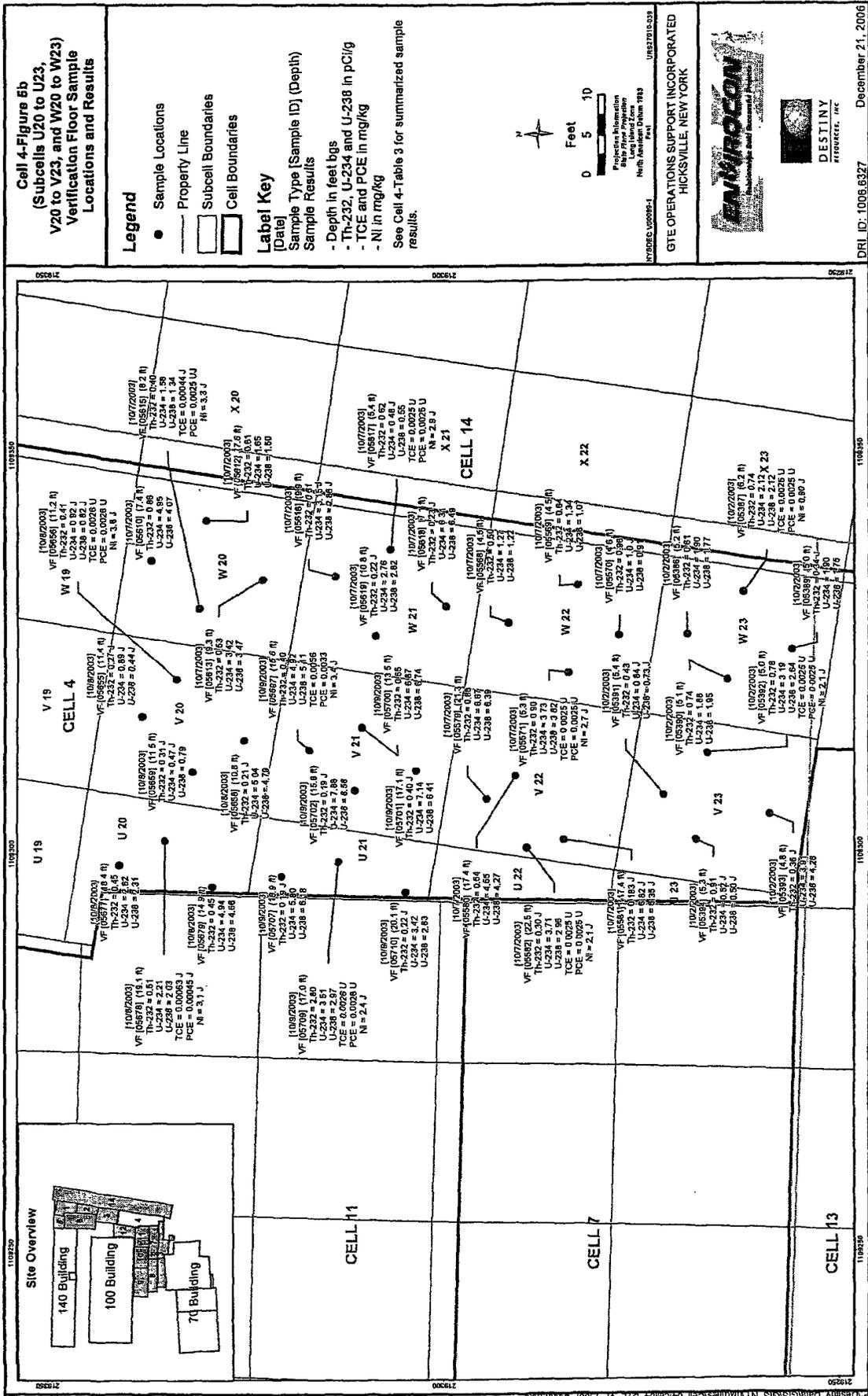
Label Key
 [Date]
 Sample Type [Sample ID] (Depth)
 Sample Results
 - Depth in feet bgs
 - TH-232, U-234 and U-238 in pCi/g
 - TCE and PCE in mg/kg
 - NI in mg/kg
 See Cell 4-Table 3 for summarized sample results.



UTRDEC W0009-1
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK
 URS2710-225



DRI ID: 1006.6326 December 21, 2006





"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

10/06/2003 03:53 PM

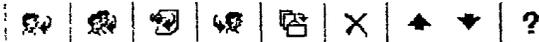
To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: ProRadCon@aol.com, "Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>, "Robert Stewart"
<rrstewar@gw.dec.state.ny.us>, "Thomas Papura"
<trpapura@gw.dec.state.ny.us>
Subject: Former Sylvania site cells 4 & 7

We have reviewed the confirmation sample data from the walls and floor of cells 4 & 7. We agree that these results are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling this cell. Once we have received your data package for this cell, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 2

GTES0003239



Close

From: jean.agostinelli@verizon.com [SMTP:jean.agostinelli@verizon.com]
To: bcohen@certilmanbalin.com; Lucky Tabor; Pam_Cox@URSCorp.com; Rob_Brathovde@URSCorp.com; carol_scholl@URSCorp.com; elie_ghannoum@URSCorp.com
Cc:
Subject: Cell 4B (south)
Sent: 10/30/03 5:18 AM **Importance:** Normal

---- Forwarded by Jean M. Agostinelli/EMPL/TX/Verizon on 10/30/2003 06:17 AM ----

"Jerry Riggi"

<jmriggi@gw.dec.s To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes

tate.ny.us> cc: ProRadCon@aol.com, "Barbara Youngberg" <bayoungb@gw.dec.state.ny.us>,"Robert

"Robert

Stewart" <rstewar@gw.dec.state.ny.us>, "Thomas Papura" <tpapura@gw.dec.state.ny.us>

10/29/2003 04:09 Subject: Cell 4B (south)

PM

We have reviewed the confirmation sample data from the walls and floor of cells 4B (south). We agree that these results are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling this cell. Once we have received your data package for this cell, we will send a formal response.

Jerry Riggi
 ERS-1, Radiation Section
 NYSDEC

Attachment A
 Page 2 of 2

<http://exchange.washcorp.com/exchange/forms/IPM/NOTE/read.asp?command=open&o...> 10/30/2003



October 27, 2003

Jean Agostinelli
GTE Operations Support Inc.
140 Cantiague Rock Road
Hickville, NY 11801

Re: 1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack
2) Borrow Soils - Mercy Hospital Stockpile
3) Borrow soils - Round Swamp and Winding Stockpile

Dear Ms. Agostinelli:

The Department has reviewed the above borrow soils reports and has the following recommendations:

1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack

- ▶ **Commack:** I recommend that you do not use the soils from Commack due the detection of 140 ppm of chromium in one of the characterization samples.
- ▶ **111 Pit:** I noticed that one of the characterization samples detected 120 ppb of benzo(a) pyrene. *This detection is above the TAGM-4046 recommended cleanup objective of 61 ppb for this compound. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentration of the contaminant. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.*

If TICs were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

- ▶ **JDP Stock Pile 2:** Regarding chemical considerations, I have no objections to you using these soils as backfill. I am awaiting Jerry Riggi's radiological evaluation of these borrow soils. His evaluation will be forwarded to you, when available.

Attachment B
Page 1 of 3

2) Borrow Soils - Mercy Hospital Stockpile

Two of the characterization samples detected 290 ppb and 100 ppb of benzo(a) pyrene. One of these samples also detected 290 ppb of benzo(a) anthracene. The TAGM-4046 recommended cleanup objectives for benzo(a) pyrene and benzo(a) anthracene are 61 ppb and 224 ppb, respectively. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentrations of the contaminants. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TIC were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

I would also like to note that 100 ppb of PCBs was detected in one of the samples. This concentration is well below the TAGM -4046 cleanup objective. However, I would check the historical use of the property from where this stockpile originated to see if PCBs were historically used there. Additional characterization samples for PCBs are recommended if PCB usage is discovered.

3) Borrow Soils - Round Swamp and Winding Stockpile

Based on the results of the three characterization samples, the Department has no objections to you using these soils as backfill. However, please note that, based on figure 1, this stockpile is located near to the entrance to the inactive hazardous waste site known as Old Bethpage Landfill (Site # 130001). This landfill historically received municipal and industrial wastes. I recommend that you verify that the stockpiled soils could not have been impacted by the former operations at this landfill.

Please note that it is your responsibility to adequately characterize the borrow soils. My above recommendations are made under the assumption that your characterization samples accurately reflect the concentrations present in the large volume of soils evaluated.

If you have any questions, please do not hesitate to call me at (631) 444-0244.

Sincerely,

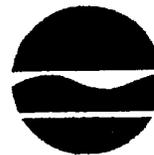


Robert R. Stewart
Environmental Engineer I

cc by e-mail: W. Parish
J. Riggi

Attachment B
Page 2 of 3

New York State Department of Environmental Conservation



Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 · FAX: (631) 444-0248

Website: www.dec.state.ny.us

January 5, 2004

Jean Agostinelli
GTE Operations Support, Inc.
170 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard, December 20, 2003
Former Sylvania Electric Products Facility, Site # V00089-1

Dear Ms. Agostinelli:

The Department has reviewed the December 20, 2003 report concerning the borrow soils from the Spagnoli Road area. Based on the data in this report, the Department finds these soils to be acceptable for use as backfill at the Former Sylvania Electric Products Facility site in Hicksville.

If you have any questions, please call me at (631) 444-0244.

Sincerely,

Robert R. Stewart
Environmental Engineer I
Environmental Engineer I

cc: W. Parish
J. Riggi

Cell 4 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 4, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 4 consists of subcells U16 to U23, V16 to V23, and W16 to W24. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 4 was performed using the floor VF floor sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 86 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 86 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 4 (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 86 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

The third report is on pages 8 through 15 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 6 of the report (Attachment page 13) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.22. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 4

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05314	0.18 J	1.72	1.46
06016	1.11	3.03	2.69
05316	0.15 J	0.57 J	0.4 J
05317	0.32 J	1.38 J	1.26
05318	0.17 J	0.52 J	0.47 J
05319	0.085 J	2.13	2.13
05320	0.16 J	0.48 J	0.53 J
05321	0.17 J	0.45 J	0.33 J
05188	0.185 J	4.15 J	4.47 J
05189	0.161 J	2.94	3.29
05191	0.15 J	3.73 J	3.71 J
05187	0.25 J	4.03	3.85
05175	0.17 J	1.01	0.93
05176	0.34 J	0.63 J	0.54 J
05177	0.22 J	0.91 J	0.88
05178	0.08 U	2.94	2.89
05677	0.45	2.62	2.31
05678	0.51	2.21	2.03
05679	0.45	4.94	4.66
05707	0.19 J	5.8	6.18
05709	2.8	3.51	2.97
05710	0.22 J	3.42	2.83
05322	0.19 J	0.37 J	0.28 J
05323	0.22 J	0.32 J	0.27 J
05324	0.29 J	0.54 J	0.32 J
05325	0.25 J	0.44 J	0.36 J
05326	0.15 J	0.62 J	0.54 J
05327	0.31 J	0.54 J	0.56 J
05328	0.24 J	0.39 J	0.23 J
05329	0.15 J	0.69 J	0.58 J
05194	0.11 U	2.5	2.75
05195	0.26 J	0.39 J	0.32 J
05192	0.22 J	1.14 J	1.29 J
05196	0.25 J	3.28	3.33
05180	0.145 J	2.71	2.67
05181	0.23 J	3.63	3.81
05179	0.129 J	2.37	2.21
05182	0.22 J	1.36	1.27
05655	0.27 J	0.89 J	0.44 J
05656	0.41	0.92 J	0.82 J
05658	0.21 J	5.04	4.79
05659	0.31 J	0.47 J	0.79
05697	0.4	4.92	5.11
05700	0.65	6.87	6.74
05701	0.4 J	7.14	6.41
05702	0.19 J	7.88	8.58

Table C.1

Cell 4

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05579	0.88	6.67	6.39
05580	0.54	4.55	4.27
05581	0.183 J	6.82 J	6.35 J
05582	0.3 J	3.71	2.96
05391	0.43	0.84 J	0.73 J
05392	0.78	3.19	2.64
05393	0.36 J	3.91	4.28
05394	0.91	0.52 J	0.5 J
05278	0.24 J	0.51 J	0.49 J
05279	0.21 J	2.18	2.15
05277	0.24 J	0.48 J	0.26 J
05276	0.22 J	3.48	3.53
05270	0.148 J	0.38 J	0.28 J
05271	0.144 J	0.48 J	0.32 J
05272	0.2 J	0.37 J	0.5 J
05273	0.25 J	0.77 J	0.54 J
05198	0.27 J	1.01 J	0.79 J
05199	0.33 J	0.54 J	0.43 J
05197	0.2 J	0.91 J	1.03
05200	0.157 J	0.48 J	0.42 J
05184	0.18 J	2.33	2.32
05185	0.18 J	1.5 J	1.2
05186	0.29 J	0.38 J	0.36 J
05183	0.146 J	1	1
05610	0.86	4.95	4.07
05612	0.61	1.65	1.5
05613	0.53	3.42	3.47
05615	0.4	1.58	1.34
05616	0.61	3.15 J	2.86 J
05617	0.62	0.48 J	0.55
05618	0.23 J	6.31	6.49
05619	0.22 J	2.76	2.82
05568	0.5	1.27	1.22
05569	0.64	1.34	1.07
05570	0.96	1 J	0.91
05571	0.9	3.73	3.62
05386	0.61	1.9	1.77
05387	0.74	2.12	2.12
05389	0.34 J	1.9	1.75
05390	0.74	1.88	1.95

Notes:

Cell area = 902 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1



Surface Soil Survey Plan

Survey Plan Summary

Site: GTEOSI, Hicksville Site

Planner(s): William R. Hoey

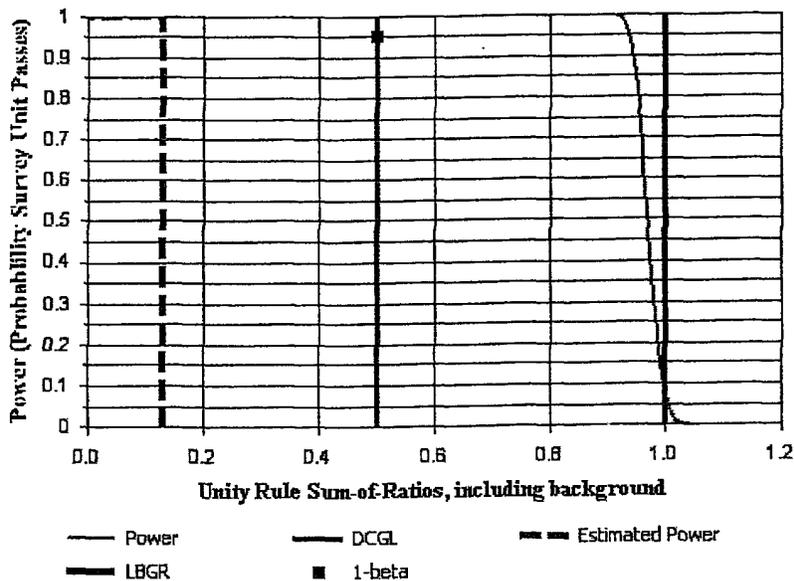
Survey Unit Name: Cell 4 Status Report with STL Data

Comments:

Area (m ²):	902	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.06
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.13
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13

Scanning Instrumentation: 3 x 3 inch NaI collimated

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.25 \pm 0.15	N/A
U-234	1 \pm 1	N/A
U-238	1 \pm 1	N/A

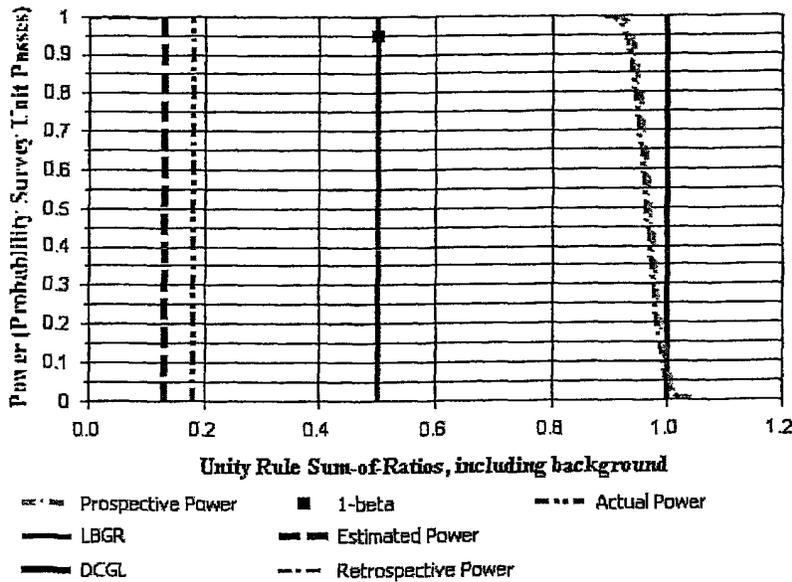


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 4 Status Report with STL Data
Report Number: 1
Survey Unit Samples: 86
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05314	S	0.18	1.72	1.46
06016	S	1.11	3.03	2.69
05316	S	0.15	0.57	0.4
05317	S	0.32	1.38	1.26
05318	S	0.17	0.52	0.47
05319	S	0.08	2.13	2.13
05320	S	0.16	0.48	0.53
05321	S	0.17	0.45	0.33
05188	S	0.18	4.15	4.47
05189	S	0.16	2.94	3.29
05191	S	0.15	3.73	3.71
05187	S	0.25	4.03	3.85
05175	S	0.17	1.01	0.93
05176	S	0.34	0.63	0.54
05177	S	0.22	0.91	0.88
05178	S	0.08	2.94	2.89
05677	S	0.45	2.62	2.31
05678	S	0.51	2.21	2.03
05679	S	0.45	4.94	4.66
05707	S	0.19	5.8	6.18
05709	S	2.8	3.51	2.97
05710	S	0.22	3.42	2.83
05322	S	0.19	0.37	0.28
05323	S	0.22	0.32	0.27
05324	S	0.29	0.54	0.32
05325	S	0.25	0.44	0.36
05326	S	0.15	0.62	0.54
05327	S	0.31	0.54	0.56
05328	S	0.24	0.39	0.23
05329	S	0.15	0.69	0.58
05194	S	0.11	2.5	2.75
05195	S	0.26	0.39	0.32
05192	S	0.22	1.14	1.29
05196	S	0.25	3.28	3.33
05180	S	0.14	2.71	2.67
05181	S	0.23	3.63	3.81
05179	S	0.13	2.37	2.21
05182	S	0.22	1.36	1.27
05655	S	0.27	0.89	0.44
05656	S	0.41	0.92	0.82
05658	S	0.21	5.04	4.79
05659	S	0.31	0.47	0.79
05697	S	0.4	4.92	5.11
05700	S	0.65	6.87	6.74
05701	S	0.4	7.14	6.41
05702	S	0.19	7.88	8.58
05579	S	0.88	6.67	6.39
05580	S	0.54	4.55	4.27
05581	S	0.18	6.82	6.35
05582	S	0.3	3.71	2.96
05391	S	0.43	0.84	0.73



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05392	S	0.78	3.19	2.64
05393	S	0.36	3.91	4.28
05394	S	0.91	0.52	0.5
05278	S	0.24	0.51	0.49
05279	S	0.21	2.18	2.15
05277	S	0.24	0.48	0.26
05276	S	0.22	3.48	3.53
05270	S	0.15	0.38	0.28
05271	S	0.14	0.48	0.32
05272	S	0.2	0.37	0.5
05273	S	0.25	0.77	0.54
05198	S	0.27	1.01	0.79
05199	S	0.33	0.54	0.43
05197	S	0.2	0.91	1.03
05200	S	0.16	0.48	0.42
05184	S	0.18	2.33	2.32
05185	S	0.18	1.5	1.2
05186	S	0.29	0.38	0.36
05183	S	0.15	1	1
05610	S	0.86	4.95	4.07
05612	S	0.61	1.65	1.5
05613	S	0.53	3.42	3.47
05615	S	0.4	1.58	1.34
05616	S	0.61	3.15	2.86
05617	S	0.62	0.48	0.55
05618	S	0.23	6.31	6.49
05619	S	0.22	2.76	2.82
05568	S	0.5	1.27	1.22
05569	S	0.64	1.34	1.07
05570	S	0.96	1	0.91
05571	S	0.9	3.73	3.62
05386	S	0.61	1.9	1.77
05387	S	0.74	2.12	2.12
05389	S	0.34	1.9	1.75
05390	S	0.74	1.88	1.95



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
05314	S	0.13
06016	S	0.51
05316	S	0.07
05317	S	0.17
05318	S	0.08
05319	S	0.12
05320	S	0.08
05321	S	0.08
05188	S	0.24
05189	S	0.18
05191	S	0.2
05187	S	0.25
05175	S	0.1
05176	S	0.14
05177	S	0.11
05178	S	0.15
05677	S	0.26
05678	S	0.27
05679	S	0.35
05707	S	0.31
05709	S	1.13
05710	S	0.2
05322	S	0.08
05323	S	0.09
05324	S	0.12
05325	S	0.11
05326	S	0.08
05327	S	0.13
05328	S	0.1
05329	S	0.08
05194	S	0.14
05195	S	0.11
05192	S	0.13
05196	S	0.22
05180	S	0.16
05181	S	0.23
05179	S	0.14
05182	S	0.13
05655	S	0.12
05656	S	0.18
05658	S	0.27
05659	S	0.14
05697	S	0.34
05700	S	0.5
05701	S	0.41
05702	S	0.4
05579	S	0.58
05580	S	0.37
05581	S	0.33
05582	S	0.24
05391	S	0.18



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
05392	S	0.4
05393	S	0.29
05394	S	0.35
05278	S	0.11
05279	S	0.16
05277	S	0.1
05276	S	0.22
05270	S	0.07
05271	S	0.07
05272	S	0.09
05273	S	0.12
05198	S	0.13
05199	S	0.14
05197	S	0.11
05200	S	0.07
05184	S	0.16
05185	S	0.12
05186	S	0.12
05183	S	0.09
05610	S	0.49
05612	S	0.28
05613	S	0.33
05615	S	0.2
05616	S	0.34
05617	S	0.24
05618	S	0.34
05619	S	0.19
05568	S	0.23
05569	S	0.28
05570	S	0.38
05571	S	0.47
05386	S	0.29
05387	S	0.35
05389	S	0.19
05390	S	0.34



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	86	N/A	N=13
Mean (SOR)	0.22	N/A	0.13
Median (SOR)	0.18	N/A	N/A
Std Dev (SOR)	0.16	N/A	0.06
High Value (SOR)	1.13	N/A	N/A
Low Value (SOR)	0.07	N/A	N/A

Statistical Test Summary

S+:	85
Critical Value:	51
Result:	Pass

Data	DCGLw - Data	Sign
0.13	0.87	+
0.51	0.49	+
0.07	0.93	+
0.17	0.83	+
0.08	0.92	+
0.12	0.88	+
0.08	0.92	+
0.08	0.92	+
0.24	0.76	+
0.18	0.82	+
0.2	0.80	+
0.25	0.75	+
0.1	0.90	+
0.14	0.86	+
0.11	0.89	+
0.15	0.85	+
0.26	0.74	+
0.27	0.73	+
0.35	0.65	+
0.31	0.69	+
1.13	-0.13	-
0.2	0.80	+
0.08	0.92	+
0.09	0.91	+
0.12	0.88	+
0.11	0.89	+
0.08	0.92	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.13	0.87	+
0.1	0.90	+
0.08	0.92	+
0.14	0.86	+
0.11	0.89	+
0.13	0.87	+
0.22	0.78	+
0.16	0.84	+
0.23	0.77	+
0.14	0.86	+
0.13	0.87	+
0.12	0.88	+
0.18	0.82	+
0.27	0.73	+
0.14	0.86	+
0.34	0.66	+
0.5	0.50	+
0.41	0.59	+
0.4	0.60	+
0.58	0.42	+
0.37	0.63	+
0.33	0.67	+
0.24	0.76	+
0.18	0.82	+
0.4	0.60	+
0.29	0.71	+
0.35	0.65	+
0.11	0.89	+
0.16	0.84	+
0.1	0.90	+
0.22	0.78	+
0.07	0.93	+
0.07	0.93	+
0.09	0.91	+
0.12	0.88	+
0.13	0.87	+
0.14	0.86	+
0.11	0.89	+
0.07	0.93	+
0.16	0.84	+
0.12	0.88	+
0.12	0.88	+
0.09	0.91	+
0.49	0.51	+
0.28	0.72	+
0.33	0.67	+
0.2	0.80	+
0.34	0.66	+
0.24	0.76	+
0.34	0.66	+
0.19	0.81	+
0.23	0.77	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.28	0.72	+
0.38	0.62	+
0.47	0.53	+
0.29	0.71	+
0.35	0.65	+
0.19	0.81	+
0.34	0.66	+

Cell 5 Status Report

INTRODUCTION

Cell 5 is comprised of all or portions of subcells Q03 to Q05, R03 to R05, and S03 to S05 and is located in the northeast corner of the 140 Property (Cell 5-Figure 1 and Figure 6 in Volume I). Excavation of Cell 5 began on December 3, 2003 and was completed on April 6, 2004. Verbal approval to backfill Cell 5 was received from NYSDEC representatives on April 20, 2004 and documented in an e-mail on May 12, 2004 (Cell 5-Attachment A). A formal request to backfill Cell 5 was submitted in a report to NYSDEC titled *Cell 5 – Attainment of Radiological and Chemical Cleanup Levels* dated July 12, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cells 5 and 6 were backfilled concurrently beginning June 10, 2004 and completed on July 27, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 2). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in two reports. The first report was titled *Borrow Soils Characterization Survey and Sampling: Spagnoli Road (SPAG2), Melville, NY*, dated March 24, 2004. Approval to use these soils for backfill was granted from NYSDEC in a letter dated April 1, 2004 (Cell 5-Attachment B, page 1). The second report addressed use of additional volumes from the same source and was titled *Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road (SPAG2), Melville, NY* dated July 12, 2004. Approval to use these additional volumes for backfill was granted from NYSDEC in a letter dated July 29, 2004 (Cell 5-Attachment B, page 2).

EXCAVATION DETAILS

Cell 5 was anticipated to be a shallow excavation concentrating in the southeast corner of the cell. However, based on the results of the Cell 2 excavation (see *Cell 2 Status Report*), it appeared excavation to deeper depths would be required. As a result, the sheet pile was reconfigured to support deep excavation and to allow continuous excavation of Cells 5 and 6 (starting in Cell 5 and working south through Cell 6).

DEPTHS OF EXCAVATION

Cell 5 was excavated to depths ranging from 22 to 54 ft bgs. The excavation depths for each subcell are provided in Cell 5-Table 1 and are shown on Cell 5-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 8,730,170 pounds of soil and debris (404 Lift Liners™) were removed from Cell 5 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 5, one anomaly was encountered. It was a concrete pad with a metal grate on top of it. Analytical results from anomaly samples are provided in Cell 5-Table 2. The approximate location where the anomaly was encountered during excavation activities is shown on Cell 5-Figure 2. The anomaly was sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 5, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 5-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 5-Figure 4 depicts a CFD plot of the 186 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 5-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. Since less than 25 percent of subcells Q03, R03 and S03 are in Cell 5, the portions of these subcells in Cell 5 are considered part of subcells Q04, R04 and S04, respectively, for sampling purposes. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Cell 5-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the exception of the C and D samples in subcell S05. The samples were not collected since the area was inaccessible due to an excavation depth of 52 (ft) bgs. One DL sample and one SP sample were selected from the samples collected from borings drilled in the vicinity of the C and D sample locations (Cell 5-Figure 6, borings DL23 and DL 25) at 52 (ft) bgs. These samples were substituted for the subcell S05 C and D VF samples.

All VF samples were analyzed by STL to demonstrate compliance with the cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Focused soil sampling was conducted to delineate the volume or type of contaminant identified or suspected beneath the surface following excavation. The reason for conducting focused soil sampling in Cell 5 was that surface soil sample results at or near design excavation depths in and around subcell S05 indicated that soils with elevated concentrations may be present. A total of 17 borings were advanced in the area to a depth of about 64 ft. As a result of this sampling effort, a sheet box was installed in the southern portion of subcell S05 (as shown by the large rectangular area in Cell 5-Figure 1), in order to support the excavation of impacted soils to a depth of 52 and 54 (ft) bgs. Cell 5-Figure 6 shows the locations of the 17 borings that were advanced as part of this program. Based on the shoring design requirements, this area was backfilled immediately with clean soil following the excavation.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 5-Table 3 and are shown on Cell 5-Figure 5. Cell 5-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the focused soil samples are provided in Cell 5-Table 5 and the boring locations are shown on Cell 5-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 5, passed this evaluation (Cell 5-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the radiological and chemical cleanup levels were attained for Cell 5.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 5-Table 1:	Cell 5 Subcell Excavation Depths
Cell 5-Table 2:	Cell 5 Anomaly Sample Results
Cell 5-Table 3:	Cell 5 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 5-Table 4:	Cell 5 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 5-Table 5:	Cell 5 Focused Soil Boring Sample Results

Figures

Cell 5-Figure 1:	Cell 5 Excavation Depth Contours
Cell 5-Figure 2:	Cell 5 Anomalies
Cell 5-Figure 3:	Cell 5 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 5-Figure 4:	Cumulative Frequency Distribution for Cell 5 Gamma Radiation Walkover Survey Data
Cell 5-Figure 5:	Cell 5 Verification Floor Sample Locations and Results
Cell 5-Figure 6:	Cell 5 Focused Soil Boring Locations

Attachments

Cell 5-Attachment A:	E-Mail from NYSDEC to GTEOSI dated May 12, 2004
Cell 5-Attachment B:	Letters from NYSDEC to GTEOSI and April 1, 2004 and July 29, 2004
Cell 5-Attachment C:	Cell 5 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 5 -Table 1
Subcell Excavation Depths**

Q03 25-28 ft.	R03 25-28 ft.	S03 22-28 ft.	Cell 1
Q04 25-31 ft.	R04 22-31 ft.	S04 22-34 ft.	
Q05 25-34 ft.	R05 28-37 ft.	S05 31-54 ft.	
Cell 6			

Notes:
Excavation depths are approximate.
 ——— Subcell Boundary
 ——— Cell Boundary

Cell 5-Table 2
Anomaly Sample Results

Sample ID	Sample Description	Sample Type	Sample Size	Sample Location	Sample Depth	Sample Orientation	Sample Date	Sample ID	Sample Description	Sample Type	Sample Size	Sample Location	Sample Depth	Sample Orientation	Sample Date	Sample ID	Sample Description	Sample Type	Sample Size	Sample Location	Sample Depth	Sample Orientation	Sample Date	
0724	Concrete Slab	Concrete Slab with grate	20' (1.9' MV - 8" Thick floor)	4	3	Under Grate	1.71	NA	2.87	58.02	58,000	NS	NS	NS	0.012 (STL)	0.00047 J (STL)	508 (STL)							
07344	Concrete Slab	Concrete Slab with grate	20' (1.9' MV - 8" Thick floor)	4.5	3	Under Grate	0.42	NA	0.31	8.58	28,185	NS	NS	NS	0.092 U (STL)	0.002 U (STL)	NS							
07355	Concrete Slab	Concrete Slab with grate	20' (1.9' MV - 8" Thick floor)	4.5	3	Under Grate	0.89	NA	0.70	12.33	NS	NS	NS	NS	0.090 U (STL)	0.000 U (STL)	NS							
07359	Concrete Slab	Concrete Slab with grate	20' (1.9' MV - 8" Thick floor)	4.5	3	Under Grate	0.88	NA	1.17	22.95	NS	NS	NS	NS	0.023 U (STL)	0.0028 U (STL)	74.4 J (STL)							

One gamma count rate for samples 07354-07358, 07359.

One gamma count rate for samples 07354-07355, 07356.

Analytes:
 - Th-232 - Thorium-232
 - U-234 - Uranium-234
 - U-235 - Uranium-235
 - U-238 - Uranium-238
 TCE - Trichloroethene
 PCE - Tetrachloroethene
 M - Nickel

Units:
 PCW - Picocurie/cm
 mg/kg - milligram/kilogram
 sum - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Qualifiers:
 U - Validation qualifier used to indicate that the result was qualified as non-detect
 J - Validation qualifier used to indicate that the result is considered an estimate

Notes:
 See Cell 5-Table 2 for sample locations.
 On-Site sample results are in plain text and include radionuclides (Th-232 and U-238) analyzed by the gamma spectroscopy system; volatile organic compounds (TCE and PCE) by solid phase microextraction and capillary gas chromatography by Stone Environmental, Inc.
 NA - Analysis was not performed.
 NS - Not sampled.
 (STL) - Results are from Stone Trent Laboratories, Inc.
 Due to an artifact in the laboratory data reporting program, the on-site analytical data should be interpreted to two significant figures.

**Cell 5-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q04	A	12737	25.2	0.33	0.34	0.35	0.0024 J	0.0013 J	0.51 J
Q04	B	12738	25.0	0.149	0.239	0.213			
Q04	C	12739	26.1	0.103	0.127	0.187			
Q04	D	12740	25.0	0.174	0.162	0.158			
Q05	A	12755	29.9	0.119	0.171	0.192			
Q05	B	12758	30.4	0.110	0.298	0.189			
Q05	C	12760	30.8	0.193	1.73	1.38			
Q05	D	12761	30.7	0.142	0.47	0.42	0.0033	0.0025 U	5.6
R04	A	12741	24.9	0.177	0.277	0.136			
R04	B	12742	26.0	0.176	0.186	0.231			
R04	C	12743	28.7	0.248	4.48	4.57			
R04	D	12744	25.4	0.194	0.55	0.40	0.0029 U	0.0029 U	0.75 J
R05	A	12762	32.2	0.220	0.43	0.196			
R05	B	12763	35.1	0.201	0.37	0.291			
R05	C	12764	33.0	0.168	0.70	0.70	0.0025 U	0.0025 U	1.7 J
R05	D	12765	31.5	0.119	0.44	0.298			
S04	A	12748	22.3	0.155	0.224	0.138			
S04	C	12749	30.7	0.099 J	0.243	0.155			
S04	D	12750	26.3	0.149	0.38	0.271	0.0025	0.0010 J	1.3 J
S05	A	12753	36.3	0.143	0.39	0.225	0.0026 U	0.0026 U	1.2 J
S05	C*	11967	52.0	0.209	13.6	13.7	0.0026 U	0.0026 U	0.36 J
S05	D*	11990	52.0	0.135	9.92	9.98			

Analytes:

Th-232 - Thorium-232

TCE - Trichloroethene

U-234 - Uranium-234

PCE - Tetrachloroethene

U-238 - Uranium-238

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 5-Figure 5 for sample ids and associated locations.

Blank cell indicates analysis was not performed.

Due to lack of data for locations C* and D* floor sample results in subcell S05, substitutions of samples from boring DL23, sample 11967, and boring DL25, sample 11990 were used to fulfill sample requirements of the ABCD sampling protocol.

Cell 5-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	0.33	25.2	Q04
Maximum U-234 (pCi/g)	13.6	52.0	S05
Maximum U-238 (pCi/g)	13.7	52.0	S05
Maximum TCE (mg/kg)	0.0033	30.7	Q05
Maximum PCE (mg/kg)	0.0013 J	25.2	Q04
Maximum Ni (mg/kg)	5.6	30.7	Q05

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PGE (mg/kg)	Ni (mg/kg)
S05	DL02	11306	41.0	0.19		31.79			
S05	DL02	11307	42.0	0.13		46.30			
S05	DL02	11308	43.0	0.43		115.07			
S05	DL02	11309	44.0	0.25		61.24			
S05	DL02	11310	45.0	0.25		37.87			
S05	DL02	11776	46.0	0.34 J		52.81			
S05	DL02	11777	47.0	0.38		30.92			
S05	DL02	11784	48.0	0.34		29.65			
S05	DL02	11785	49.0	0.44		22.83			
S05	DL02	11793	50.0	0.38		43.52			
S05	DL02	11814	51.0	0.30		50.22			
S05	DL02	11815	52.0	0.39		41.51			
S05	DL02	11817	53.0	0.43		36.80			
S05	DL02	11821	54.0	< 0.07		30.74			
S05	DL02	11822	55.0	0.37		44.95			
S05	DL02	11823	56.0	0.43		29.08			
S05	DL02	11824	57.0	0.46		36.61			
S05	DL02	11825	58.0	0.39		24.95			
S05	DL02	11838	59.0	0.46		41.11			
S05	DL02	11839	60.0	0.44		22.98			
S05	DL02	11844	61.0	0.36		36.83			
S05	DL02	11845	62.0	0.39		14.40			
S05	DL02	11852	63.0	0.35		17.75			
S05	DL02	11857	64.0	0.39	16.8	16.4	0.0026 U	0.0026 U	0.37 J
S05	DL03	11311	41.0	0.38		142.24			
S05	DL03	11312	42.0	0.27		56.75			
S05	DL03	11313	43.0	0.23		65.71			
S05	DL03	11314	44.0	0.31		88.97			
S05	DL03	11315	45.0	< 0.05		22.74			
S05	DL03	11778	46.0	0.28		15.44			
S05	DL03	11779	47.0	0.36		24.44			
S05	DL03	11786	48.0	0.34		41.51			
S05	DL03	11787	49.0	0.30		21.62			
S05	DL03	11792	50.0	0.40		22.70			
S05	DL03	11962	51.0	0.32		33.12	0.0026 U	0.0026 U	0.93 J
S05	DL03	11964	52.0	0.35		16.88 J			
S05	DL03	11973	53.0	0.39		26.73			
S05	DL03	12329	54.0	0.232	31.9	31.4	0.0026 U	0.0026 UJ	0.79 J
S05	DL04	11316	41.0	0.37		57.81			
S05	DL04	11317	42.0	0.13		26.63			
S05	DL04	11318	43.0	0.21		98.18			
S05	DL04	11319	44.0	0.25		200.81			
S05	DL04	11320	45.0	0.19		90.86			
S05	DL04	11495	46.0	0.30		37.30			
S05	DL04	11497	47.0	0.36		43.35			
S05	DL04	11518	48.0	0.40		39.76			
S05	DL04	11591	49.0	0.32		32.16			
S05	DL04	11668	50.0	0.24		38.93			

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
S05	DL04	11690	51.0	0.42		32.59			
S05	DL04	11691	52.0	0.39		30.39			
S05	DL04	11698	53.0	0.44		35.80			
S05	DL04	11699	54.0	0.37		34.39			
S05	DL04	11703	55.0	0.38		38.33			
S05	DL04	11704	56.0	0.43		49.31			
S05	DL04	11705	57.0	0.41		40.88			
S05	DL04	11706	58.0	0.47		37.91			
S05	DL04	11707	59.0	0.29		38.33			
S05	DL04	11708	60.0	0.41		39.50			
S05	DL04	11788	61.0	0.45		17.30			
S05	DL04	11789	62.0	0.35		22.96			
S05	DL04	11790	63.0	0.36		16.80			
S05	DL04	11791	64.0	0.32	18.2	18.6	0.0026 U	0.0026 U	0.43 J
S05	DL07	11361	41.0	0.24		15.25			
S05	DL07	11362	42.0	0.13		24.41			
S05	DL07	11364	43.0	0.41		49.89			
S05	DL07	11366	44.0	< 0.06		162.48			
S05	DL07	11367	45.0	0.18		43.95			
S05	DL07	11471	46.0	0.37		75.40			
S05	DL07	11472	47.0	0.43		55.98			
S05	DL07	11519	48.0	0.46		39.61			
S05	DL07	11590	49.0	0.31 J		19.81			
S05	DL07	11669	50.0	0.45		16.60			
S05	DL07	11955	51.0	0.46		66.09	0.0026 U	0.0026 U	0.43 J
S05	DL07	11963	52.0	0.35		41.08 J			
S05	DL07	11965	53.0	0.34		28.39			
S05	DL07	11995	54.0	0.29		52.11			
S05	DL07	11996	55.0	0.30		22.98 J			
S05	DL07	12330	56.0	0.298	14.3	14.0	0.0026 U	0.0026 UJ	0.38 J
S05	DL11	11286	41.0	0.41		20.12			
S05	DL11	11287	42.0	0.19		10.38			
S05	DL11	11288	43.0	0.26		18.72			
S05	DL11	11289	44.0	0.30		36.96			
S05	DL11	11368	45.0	0.21		76.19			
S05	DL11	11507	46.0	0.38		14.25			
S05	DL11	11508	47.0	0.28		10.46			
S05	DL11	11534	48.0	0.37 J		16.61			
S05	DL11	11617	49.0	0.42 J		12.00			
S05	DL11	11979	50.0	0.44		14.14			
S05	DL11	11989	51.0	0.40		12.00 J			
S05	DL11	12034	52.0	0.39		11.63 J			
S05	DL11	12035	53.0	0.34	12.0	11.6	0.0026 U	0.0026 U	0.26 J
S05	DL12	11296	41.0	0.21		20.30			
S05	DL12	11297	42.0	0.22		17.50			
S05	DL12	11298	43.0	0.32		27.75			
S05	DL12	11299	44.0	0.22		40.59			
S05	DL12	11300	45.0	0.23		65.11			

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
S05	DL12	11498	46.0	0.33		21.84			
S05	DL12	11499	47.0	0.29		26.79			
S05	DL12	11536	48.0	0.33		15.98			
S05	DL12	11592	49.0	0.37 J		26.77			
S05	DL12	11670	50.0	0.36		13.83			
S05	DL12	11766	51.0	0.35		14.25			
S05	DL12	12036	52.0	0.153	11.7	11.8	0.0026 U	0.0026 U	0.51 J
S05	DL13	11321	41.0	0.33		13.28			
S05	DL13	11322	42.0	0.39		14.99			
S05	DL13	11323	43.0	0.21		14.78			
S05	DL13	11325	44.0	0.23		47.02			
S05	DL13	11327	45.0	0.34		107.19			
S05	DL13	11509	46.0	0.22		126.46			
S05	DL13	11510	47.0	0.33		27.52			
S05	DL13	11539	48.0	0.50 J		13.05			
S05	DL13	11612	49.0	0.54 J		11.36			
S05	DL13	11920	51.0	0.38		12.81			
S05	DL13	11921	52.0	0.30		27.38 J			
S05	DL13	11922	53.0	0.41		7.07			
S05	DL13	11923	54.0	0.30		8.65			
S05	DL13	11929	55.0	0.50		6.64 UJ			
S05	DL13	11930	56.0	0.43		< 3.97			
S05	DL13	11931	57.0	0.40		< 3.76			
S05	DL13	11932	58.0	0.36		7.80			
S05	DL13	11933	59.0	0.43		9.13			
S05	DL13	11934	60.0	0.44		11.14 J			
S05	DL13	11935	61.0	0.38		14.70 J			
S05	DL13	11946	62.0	0.231	3.60	3.68	0.0026 U	0.0026 U	0.43 J
S05	DL14	11328	41.0	0.23		10.75			
S05	DL14	11330	42.0	0.31		14.53			
S05	DL14	11332	43.0	0.13		15.96			
S05	DL14	11333	44.0	0.31		40.80			
S05	DL14	11411	45.0	0.66		214.30			
S05	DL14	11511	46.0	0.24		65.91			
S05	DL14	11512	47.0	0.29		34.55			
S05	DL14	11537	48.0	0.41		34.93			
S05	DL14	11598	49.0	0.29		18.02			
S05	DL14	11671	50.0	< 0.07		12.58			
S05	DL14	11992	51.0	0.34		11.37 J			
S05	DL14	11993	52.0	0.37		11.00			
S05	DL14	11994	53.0	0.34		11.25			
S05	DL14	12038	54.0	0.193 J	11.1	11.2	0.0026 U	0.0026 U	0.31 J
S05	DL17	11430	41.0	0.20		3.95			
S05	DL17	11431	42.0	0.20		10.80			
S05	DL17	11432	43.0	0.16		< 2.87			
S05	DL17	11433	44.0	0.20		< 2.95			
S05	DL17	11434	45.0	0.21		3.44			
S05	DL18	11446	41.0	0.23		< 2.98			

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCF (mg/kg)	Ni (mg/kg)
S05	DL18	11447	42.0	0.27		< 3.04			
S05	DL18	11448	43.0	0.29		3.67 J			
S05	DL18	11449	44.0	0.28		5.41			
S05	DL18	11450	45.0	0.19		12.26			
S05	DL18	11451	46.0	0.19		31.12			
S05	DL18	11452	47.0	< 0.06		12.32			
S05	DL18	11622	48.0	0.35		< 4.80			
S05	DL18	11623	49.0	0.28		< 3.91			
S05	DL18	12331	50.0	0.38	7.49	7.63	0.0026 U	0.0026 UJ	0.43 J
S05	DL19	11454	41.0	0.19		4.03			
S05	DL19	11456	42.0	0.24		6.40			
S05	DL19	11457	43.0	0.26		< 3.37			
S05	DL19	11458	44.0	0.18		6.44			
S05	DL19	11459	45.0	0.18		10.88			
S05	DL19	11464	46.0	0.32		6.96			
S05	DL19	11465	47.0	0.28		10.89			
S05	DL19	11624	48.0	0.28		< 3.62			
S05	DL19	11625	49.0	0.28		12.91			
S05	DL19	12332	50.0	0.43	6.73	7.00	0.0026 U	0.0026 UJ	0.26 J
S05	DL22	11526	41.0	0.21		11.47			
S05	DL22	11527	42.0	0.20		12.57			
S05	DL22	11528	43.0	0.34		20.61			
S05	DL22	11529	44.0	0.22 J		23.72			
S05	DL22	11530	45.0	0.25		19.62			
S05	DL22	11531	46.0	0.37		21.35			
S05	DL22	11532	47.0	0.33 J		15.03			
S05	DL22	11533	48.0	0.34		11.61			
S05	DL22	11632	49.0	0.36		12.75			
S05	DL22	11895	50.0	0.38		15.68			
S05	DL22	11896	51.0	0.64		13.54			
S05	DL22	11897	52.0	0.35		10.31			
S05	DL22	11898	53.0	0.46		12.61 J			
S05	DL22	11899	54.0	0.38		11.95			
S05	DL22	11900	55.0	0.36		21.09			
S05	DL22	11905	56.0	0.39		14.47			
S05	DL22	11906	57.0	0.39		13.37 J			
S05	DL22	11907	58.0	0.36		14.87			
S05	DL22	11908	59.0	0.46		24.08 J			
S05	DL22	11909	60.0	0.43		10.23			
S05	DL22	11910	61.0	0.38		12.86 J			
S05	DL22	11911	62.0	0.40		9.34			
S05	DL22	11912	63.0	0.42		18.93			
S05	DL22	11913	64.0	0.34	9.59	9.67	0.0026 U	0.0026 U	0.40 J
S05	DL23	11567	41.0	0.18 J		28.29			
S05	DL23	11568	42.0	0.18		15.88			
S05	DL23	11569	43.0	0.22		52.21			
S05	DL23	11570	44.0	0.16		34.29			
S05	DL23	11571	45.0	0.43 J		51.12			

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
S05	DL23	11593	46.0	0.30		41.88			
S05	DL23	11594	47.0	0.48 J		16.11			
S05	DL23	11595	48.0	0.35 J		17.91			
S05	DL23	11631	49.0	0.28		26.80			
S05	DL23	11681	50.0	0.29		12.37			
S05	DL23	11747	51.0	0.47		15.25			
S05	DL23	11967	52.0	0.209	13.6	13.7	0.0026 U	0.0026 U	0.36 J
S05	DL24	11559	41.0	0.20		48.74			
S05	DL24	11560	42.0	0.30		22.15			
S05	DL24	11561	43.0	0.19		34.63			
S05	DL24	11562	44.0	0.19		21.75			
S05	DL24	11563	45.0	< 0.05		20.58			
S05	DL24	11564	46.0	0.38 J		24.26			
S05	DL24	11565	47.0	0.42		12.32			
S05	DL24	11566	48.0	0.07 UJ		14.22			
S05	DL24	11630	49.0	0.45 J		16.34			
S05	DL24	11687	50.0	0.36		15.86			
S05	DL24	11767	51.0	0.23		23.23			
S05	DL24	11782	52.0	0.70		21.38			
S05	DL24	11783	53.0	0.40 J		7.25			
S05	DL24	11969	54.0	0.41	11.0	11.0	0.0026 U	0.0026 U	0.45 J
S05	DL24	11997	55.0	0.31		14.79			
S05	DL24	12002	56.0	0.32		16.15 J			
S05	DL24	12004	57.0	0.35		14.36 J			
S05	DL24	12008	58.0	0.39		13.66			
S05	DL24	12009	59.0	0.41		13.52 J			
S05	DL24	12017	60.0	0.45		12.35			
S05	DL24	12018	61.0	0.42		15.94 J			
S05	DL24	12019	62.0	0.35		11.48 J			
S05	DL25	11596	41.0	0.30		25.34			
S05	DL25	11597	42.0	0.16 J		3.90			
S05	DL25	11604	43.0	0.19		18.68			
S05	DL25	11605	44.0	0.21		20.78			
S05	DL25	11606	45.0	0.03 UJ		32.31			
S05	DL25	11607	46.0	0.09 UJ		27.00			
S05	DL25	11608	47.0	0.32		11.13			
S05	DL25	11609	48.0	0.39		12.59			
S05	DL25	11610	49.0	0.38		19.72			
S05	DL25	11682	50.0	0.31		11.55			
S05	DL25	11748	51.0	0.25		10.46			
S05	DL25	11990	52.0	0.135	9.92	9.98			
S05	DL25	11991	53.0	0.37		11.55			
S05	DL25	12335	54.0	0.309	8.92	9.11	0.0026 U	0.0026 UJ	0.16 J
S05	DL30	11665	41.0	0.19		6.85			
S05	DL30	11666	42.0	0.18		< 3.01			
S05	DL30	11672	43.0	0.17 J		3.23 J			
S05	DL30	11673	44.0	< 0.05		< 2.82			
S05	DL30	11674	45.0	0.22 J		< 2.66			

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	Tr-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
S05	DL30	11675	46.0	0.20		3.65 J			
S05	DL30	12339	47.0	0.183	8.92	9.50	0.0026 U	0.00067 J	4.2 U
S05	DL31	11676	41.0	0.18		33.04			
S05	DL31	11677	42.0	0.18		37.96			
S05	DL31	11678	43.0	0.22		15.53			
S05	DL31	11679	44.0	0.29		18.65			
S05	DL31	11680	45.0	0.19		17.53			
S05	DL31	11683	46.0	0.42		9.13			
S05	DL31	11684	47.0	0.31		11.88			
S05	DL31	11685	48.0	0.37		8.58			
S05	DL31	11686	49.0	0.48		7.86			
S05	DL31	11924	50.0	0.36		< 4.84			
S05	DL31	11926	51.0	1.10		17.21 J			
S05	DL31	11927	52.0	0.46		< 4.38			
S05	DL31	11928	53.0	0.35		19.64 J			
S05	DL31	11936	54.0	0.40		12.11			
S05	DL31	11937	55.0	0.45		9.76			
S05	DL31	11944	56.0	0.49		12.32			
S05	DL31	11945	57.0	0.35		12.11 J			
S05	DL31	11948	58.0	0.34		9.77			
S05	DL31	11949	59.0	0.36		15.68			
S05	DL31	11952	60.0	0.42		16.50			
S05	DL31	11954	61.0	0.40		31.73			
S05	DL31	11957	62.0	0.43		19.84 J			
S05	DL31	11959	63.0	0.38		19.84			
S05	DL31	11961	64.0	0.167	12.9	13.0	0.0026 U	0.0026 U	0.46 J

**Cell 5-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

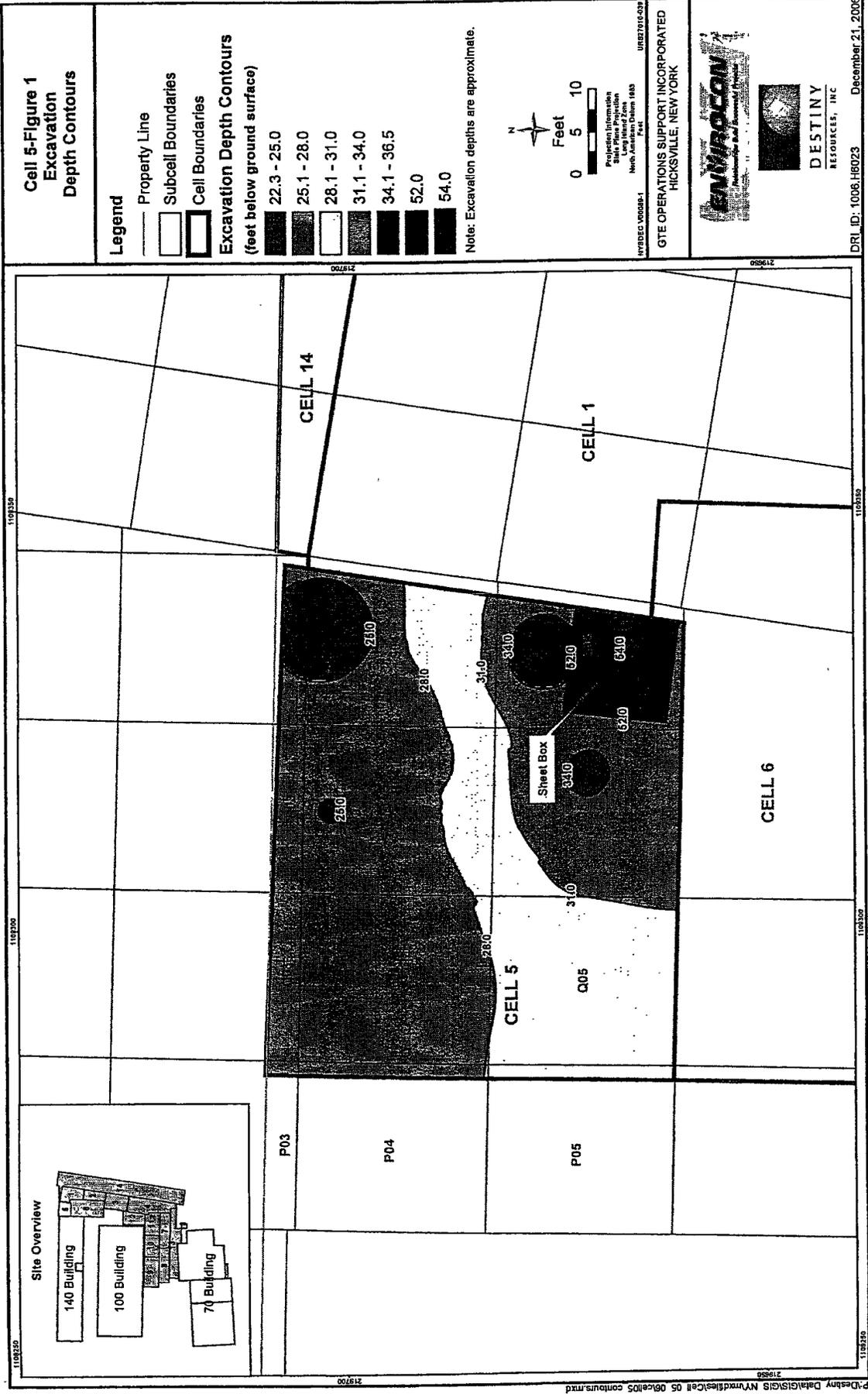
See Cell 5-Figure 6 for boring locations.

DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

Off-Site sample results are in **bold font** and indicate that the analysis was performed by Severn Trent Laboratories, Inc.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.



DRI ID: 1008.H6023 December 21, 2008

**Cell 6-Figure 2
Anomalies**

Legend

- Concrete Slab With Grate
- Property Line
- Subcell Boundaries
- Cell Boundaries

See Cell 6-Table 2 for summarized sample results.



0 5 10
Feet

Projection Information
State Plane
Long Island Zone
North American Datum 1983

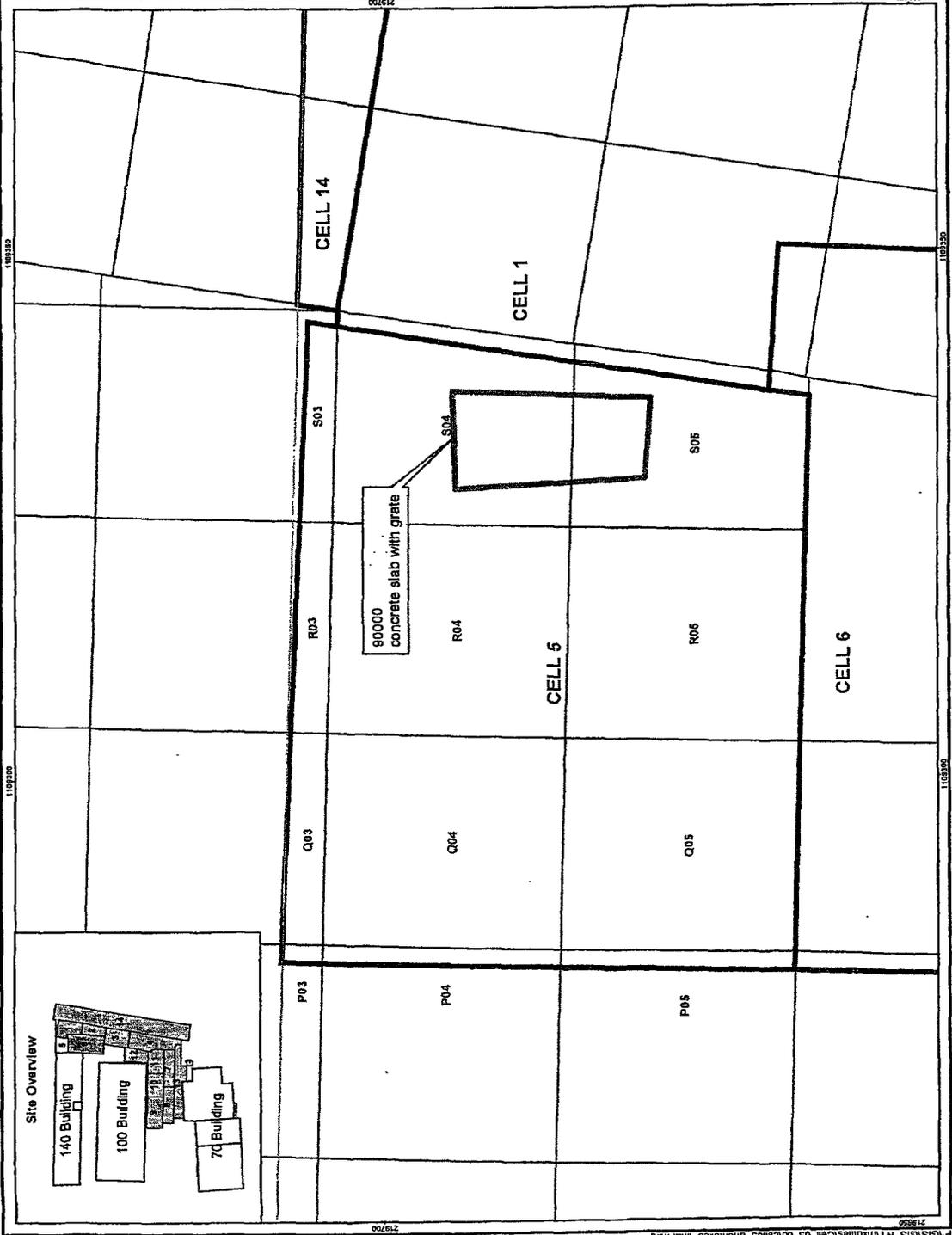
NYREG-10008-1

JURISDICTION

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DRI ID- 1008 H8440 December 21, 2008



P:\GIS\GIS NY\mxd\Cell 05\Cell05 anomalies final.mxd

Cell 5-Figure 3
Post-Excavation
Gamma Radiation
Walkover Survey Results

Legend

- Lower Population - 81% of data points (0 - 3024 cpm)
- Upper Population - 9% of data points (3025 - 3498 cpm)
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

0 5 10
 Feet

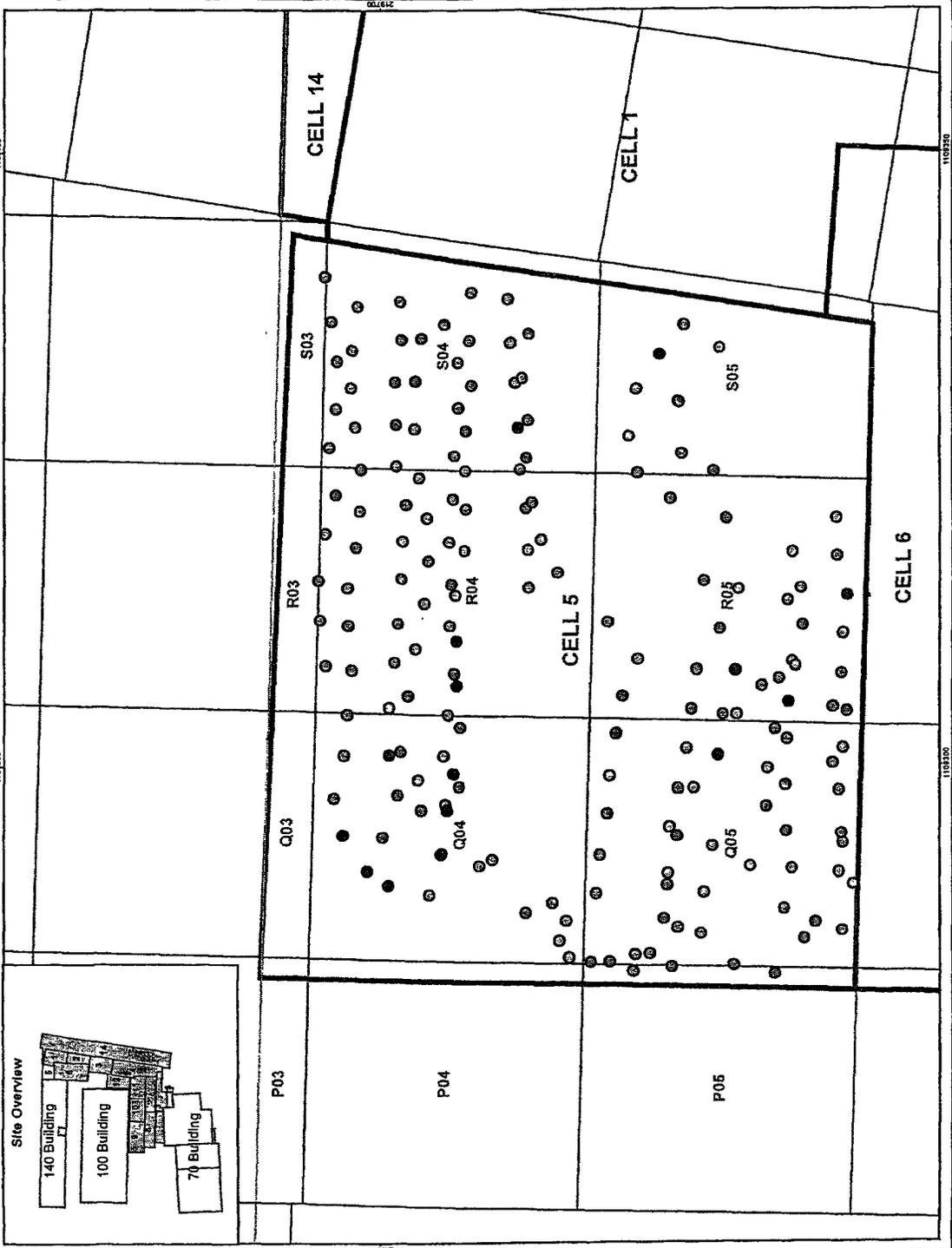
Projection Information
 UTM Zone 18N
 North American Datum 1983

UNSD2016-021
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

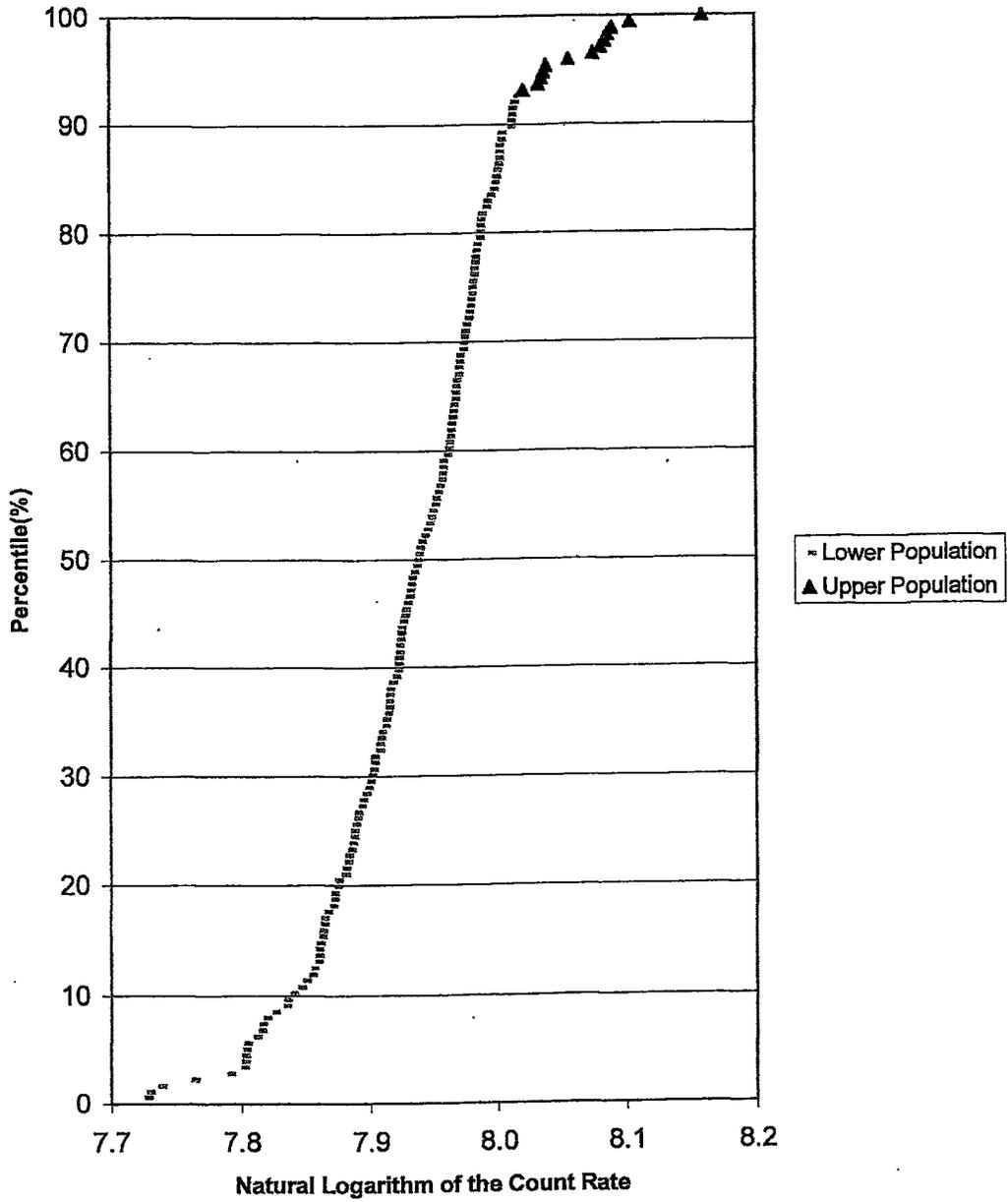
ENVIRONMENTAL

DESTINY
 RESOURCES, INC.

DRI ID - 1006.H6117 December 21, 2009



Cell 5-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



Cell 5-Figure 5 Verification Floor Sample Locations and Results

Legend

- Sample Locations
- ▬ Building
- ▬ Property Line
- ▬ Subcell Boundaries
- ▬ Cell Boundaries

Label Key
[Date]
Sample Type [Sample ID] (Depth)
Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- NI in mg/kg

See Cell 5-Table 3 for summarized sample results.

Due to lack of data for locations C* and D* floor sample results in subcell S05, substitutions of samples from boring DL23, sample 11967, and boring DL25, sample 11890 were used to fulfill sample requirements of the ABCD sampling protocol.

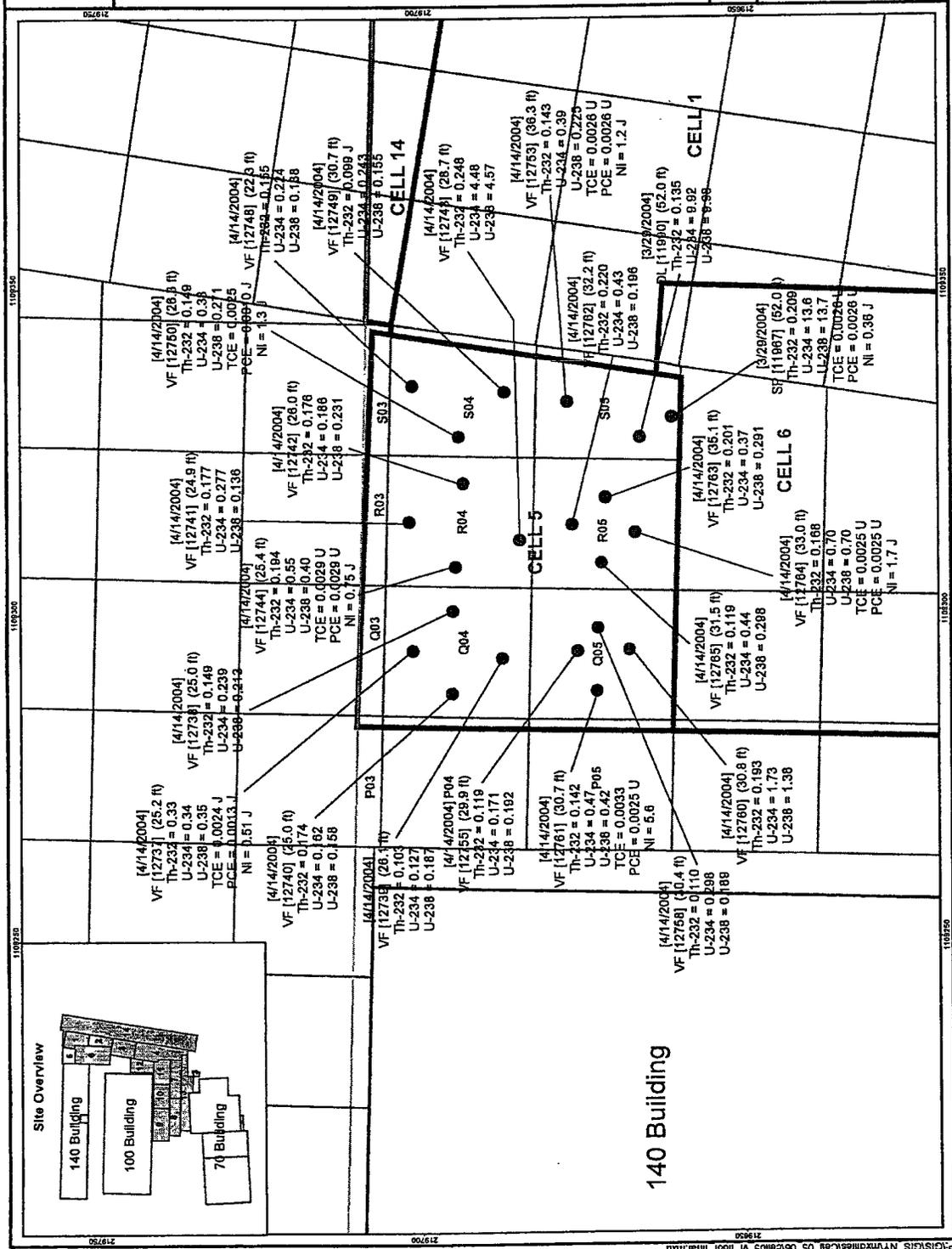
Feet
0 5 10

Projection Information
State Plane, NAD 83
North American Datum 1983
Feet

UNRESTRICTED
HICKSVILLE, NEW YORK

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

DRI ID: 1008.H6365 December 21, 2005







"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc:
Subject: Cells 5,10,11 and Cell 12 units O18,19, P18, P19, Q18, Q19

05/12/2004 03:54 PM

We have conducted walkover surveys of Cells 5,10,11,12 (units O,P, and Q 18-19) and reviewed the CF/VF sample data including the DL samples from the subsurface soil boreholes. We agree that these results are below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore we have no objection to backfilling these cells. Upon receipt and review of your data packages for these cells and receipt of the sample results from our contract lab, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003280

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • **FAX:** (631) 444-0248
Website: www.dec.state.ny.us



April 1, 2004

Jean Agostinelli, Project Manager
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

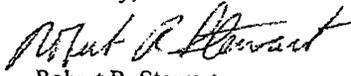
Re: Borrow Soils Report, Spagnoli Road (SPAG2), March 24, 2004
Former Sylvania Electric Products Facility (FSEPF), #V00089-1

Dear Ms. Agostinelli:

I have read the Borrow Soils Report for Spagnoli Road dated March 24, 2004. Based on the results of your samples, the Department has no objections to you using these soils for backfill at the FSEPF site.

I have identified what I believe to be a typographical error in the notes for Table 4 (PCB results). In regard to the results by the Method 8082, it is stated, "Results reported in mg/kg or parts per billion (ppb)." Mg/kg should instead be "µg/kg". If I am incorrect, please notify me.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi
J. Nealon, NYSDOH

Attachment B
Page 1 of 2

GTES0003281

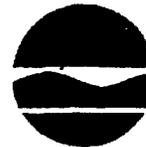
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

July 29, 2004

Jean Agostinelli
Vice President - Controller
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road
(SPAG2), Melville, NY

Dear Ms. Agostinelli:

I have reviewed the subject report on the borrow soils proposed for use as backfill at the Former Sylvania Electric Product Facility site in Hicksville, site #V00089-1. Based on the sampling results presented in this report, I find the borrow soils at this location to be suitable for use as backfill at the site.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi

Cell 5 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 5, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 5 consists of all or portions of subcells Q03 to Q05, R03 to R05, and S03 to S05. (Since less than 25 percent of subcells Q03, R03 and S03 are in Cell 5, the portions of these subcells that are in Cell 5 are considered part of subcells Q04, R04 and S04, respectively, for this evaluation) The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See section 8.0 of the main report for additional details on the MARSSIM protocol.

This evaluation of Cell 5 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 22 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 22 samples are presented in the table on page 3 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 5, subcells , (Attachment page 5), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 22 soil sample analyses.

Beginning on page 4 of this Attachment are three COMPASS reports. (See section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 5 and 6 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 6) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on page 3 of this Attachment.

The third report is on pages 7 through 10 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on page 3. On the first page of this report (Attachment page 7) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 10) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.09. As is explained in section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 5

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No	P-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
12737	0.33	0.34	0.35
12738	0.149	0.239	0.213
12739	0.103	0.127	0.187
12740	0.174	0.162	0.158
12755	0.119	0.171	0.192
12758	0.11	0.298	0.189
12760	0.193	1.73	1.38
12761	0.142	0.47	0.42
12741	0.177	0.277	0.136
12742	0.176	0.186	0.231
12743	0.248	4.48	4.57
12744	0.194	0.55	0.4
12762	0.22	0.43	0.196
12763	0.201	0.37	0.291
12764	0.168	0.7	0.7
12765	0.119	0.44	0.298
12748	0.155	0.224	0.138
12749	0.099 J	0.243	0.155
12750	0.149	0.38	0.271
12753	0.143	0.39	0.225
11967	0.209	13.6	13.7
11990	0.135	9.92	9.98

Notes:

Cell area = 258 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLW units are pCi/g.
Building surface DCGLW units are dpm/100 cm².

Contaminant	Type	DCGLW	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

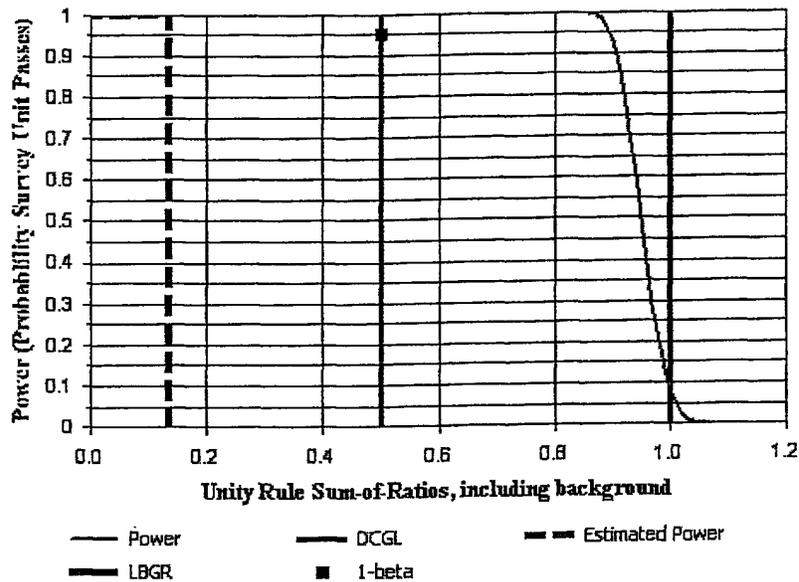


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 5 with STL Data		
Comments:			
Area (m ²):	258	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.1
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.14
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	80
U-238	50.00	N/A	N/A	N/A	107

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.2 \pm 0.05	N/A
U-234	1.7 \pm 3.5	N/A
U-238	1.6 \pm 3.5	N/A

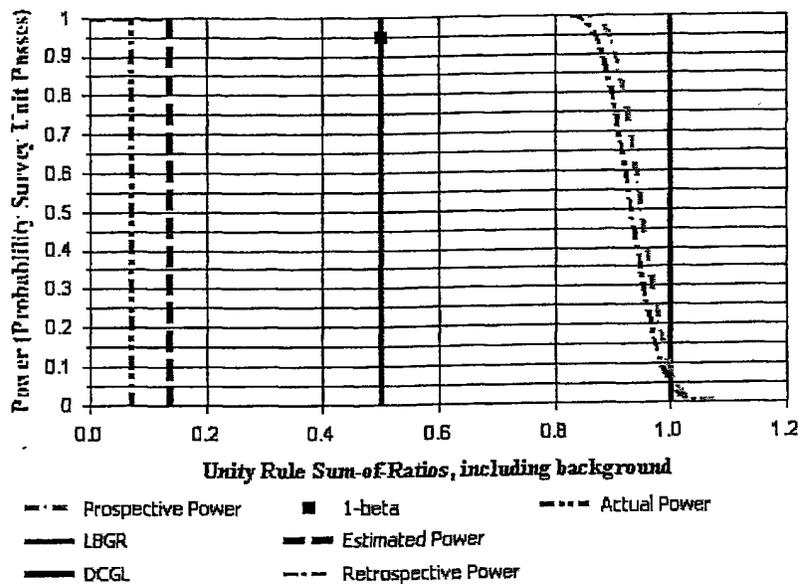


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 5 with STL Data
Report Number: 1
Survey Unit Samples: 22
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
12737	S	0.33	0.34	0.35
12738	S	0.15	0.24	0.21
12739	S	0.1	0.13	0.19
12740	S	0.17	0.16	0.16
12755	S	0.12	0.17	0.19
12758	S	0.11	0.3	0.19
12760	S	0.19	1.73	1.38
12761	S	0.14	0.47	0.42
12741	S	0.18	0.28	0.14
12742	S	0.18	0.19	0.23
12743	S	0.25	4.48	4.57
12744	S	0.19	0.55	0.4
12762	S	0.22	0.43	0.2
12763	S	0.2	0.37	0.29
12764	S	0.17	0.7	0.7
12765	S	0.12	0.44	0.3
12748	S	0.16	0.22	0.14
12749	S	0.1	0.24	0.16
12750	S	0.15	0.38	0.27
12753	S	0.14	0.39	0.22
11967	S	0.21	13.6	13.7
11990	S	0.14	9.92	9.98

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
12737	S	0.13
12738	S	0.06
12739	S	0.04
12740	S	0.07
12755	S	0.05
12758	S	0.05
12760	S	0.13
12761	S	0.07
12741	S	0.07
12742	S	0.07
12743	S	0.27
12744	S	0.09
12762	S	0.09
12763	S	0.09
12764	S	0.09
12765	S	0.06
12748	S	0.06
12749	S	0.04



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
12750	S	0.07
12753	S	0.06
11967	S	0.62
11990	S	0.45



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	22	N/A	N=13
Mean (SOR)	0.12	N/A	0.14
Median (SOR)	0.07	N/A	N/A
Std Dev (SOR)	0.14	N/A	0.1
High Value (SOR)	0.62	N/A	N/A
Low Value (SOR)	0.04	N/A	N/A

Cell 6 Status Report

INTRODUCTION

Cell 6 is comprised of subcells Q06 to Q11, R06 to R11, U09 to U11 and portions of subcells U05 to U08 and V09 to V11. Cell 6 is on the east side of the 140 Property (Cell 6-Figure 1 and Figure 6 in Volume I). Subcells U05 to U07 were excavated to approximately 16 to 24 ft bgs as part of Cell 1. Subcells U08 to U11 and V09 to V11 were excavated to approximately 20 to 29 ft bgs as part of Cell 2. These subcells were subsequently addressed as Cell 6 (See *Excavation Details* below). Excavation of Cell 6 began on December 11, 2003 and was completed on May 12, 2004. Verbal approval to backfill Cell 6 was received from NYSDEC representatives on May 19, 2004 and documented in an e-mail on February 4, 2005 (Cell 6-Attachment A). A formal request to backfill Cell 6 was submitted in a report to NYSDEC titled *Cell 6 – Attainment of Radiological and Chemical Cleanup Levels* dated August 23, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cells 6 and 5 were backfilled concurrently beginning June 10, 2004 and were completed on July 27, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 2). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in two reports. The first report was titled *Borrow Soils Characterization Survey and Sampling: Spagnoli Road (SPAG2), Melville, NY*, dated March 24, 2004. Approval to use these soils for backfill was granted from NYSDEC in a letter dated April 1, 2004 (Cell 6-Attachment B, page 1). The second report addressed use of additional volumes from the same source and was titled *Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road (SPAG2), Melville, NY* dated July 12, 2004. Approval to use these additional volumes for backfill was granted from NYSDEC in a letter dated July 29, 2004 (Cell 6-Attachment B, page 2).

EXCAVATION DETAILS

During the excavation of Cell 2 (Figure 5 in Volume I), it was determined that the cleanup levels in subcells U08 to U11 could not be attained within the maximum design excavation depths established for the cell. The excavated surfaces in subcells U08 to U11 were covered with orange plastic snow fence to delineate the unexcavated surface and backfilled. Cells 1, 2 and 6 were reconfigured (Figure 6 in Volume I) and the design excavation depth for Cell 6 was increased to support the expected excavation depths in subcells U08 to U11. It was necessary to include portions of subcells U05 to U07 from Cell 1 and portions of subcells V09 to V11 from Cell 2 into the reconfigured Cell 6 to facilitate the driving of sheet pile walls. After the reconfiguration, the sheet pile completely encompassed Cells 5 and 6 without a common wall separating the cells. The new configuration was designed to allow continuous excavation between the two cells starting from the north in Cell 5 and working south through Cell 6.

DEPTHS OF EXCAVATION

Cell 6 was excavated to depths ranging from approximately 3 to 42 ft bgs. The excavation depths for each subcell are provided in Cell 6-Table 1 and are shown on Cell 6-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 29,310,930 pounds of soil and debris (1357 Lift Liners™) were removed from Cell 6 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 6, various anomalies were encountered. The anomalies were pipes and a leaching pool. A list of Cell 6 anomalies along with analytical results from anomaly samples is provided in Cell 6-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 6-Figure 2. All of the anomalies encountered during the excavation activities in Cell 6 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 6, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 6-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 6-Figure 4 depicts a CFD plot of the 756 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 6-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical Site cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 of Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the exception of subcell V11 since the sample was collected as part of Cell 2. The depths of excavation in subcell V11 did not exceed the previous depths of excavation. Since less than 25% of subcells U05, V09 and V10 are in Cell 6, they are considered part of subcells U06, U09 and U10, respectively, for

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

sampling purposes.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Focused soil sampling was conducted with hand augers in Cell 6 on the open excavation floor from February through May 2004, prior to backfilling conducted in June and July 2004. Surface soil sample results at or near design excavation depths indicated that soils with elevated concentrations of uranium may be present below design excavation depths. Cell 6-Figure 6 shows the locations of the 33 borings that were advanced as part of this program.

Samples were collected from each boring in Cell 6 beginning at the final excavation depth of 30 to 41 ft bgs down to a final boring depth ranging from 40 to 64.5 ft bgs in 1-foot intervals. The bottom sample from each boring was an SP sample and the other samples were DL samples. The focused soil sampling results for uranium identified residual uranium above the cleanup level (Cell 6-Table 5). The results were used to model the potential for transport of uranium off Site and were reported to NYSDEC in *Potential Transport of Uranium from Subsurface Soils in Cell 6 to the Point of Interest Report*, November 2006.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 6-Table 3 and are shown on Cell 6-Figure 5. Cell 6-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the focused soil samples are provided in Cell 6-Table 5 and the boring locations are shown on Cell 6-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 6, passed this evaluation (Cell 6-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

The data generated from the focused soil sampling in Cell 6 identified residual soils with uranium slightly above the cleanup levels below the engineered excavation limit.

CONCLUSION

Based on STL VF sample results, the Site cleanup levels were attained for Cell 6.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 6-Table 1:	Cell 6 Subcell Excavation Depths
Cell 6-Table 2:	Cell 6 Anomaly Sample Results
Cell 6-Table 3:	Cell 6 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 6-Table 4:	Cell 6 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 6-Table 5:	Cell 6 Focused Soil Boring Sample Results

Figures

Cell 6-Figure 1:	Cell 6 Excavation Depth Contours
Cell 6-Figure 2:	Cell 6 Anomalies
Cell 6-Figure 3:	Cell 6 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 6-Figure 4:	Cumulative Frequency Distribution for Cell 6 Gamma Radiation Walkover Survey Data
Cell 6-Figure 5:	Cell 6 Verification Floor Sample Locations and Results
Cell 6-Figure 6:	Cell 6 Focused Soil Boring Locations

Attachments

Cell 6-Attachment A:	E-Mail from NYSDEC to GTEOSI dated February 4, 2005
Cell 6-Attachment B:	Letters from NYSDEC to GTEOSI and April 1, 2004 and July 29, 2004
Cell 6-Attachment C:	Cell 6 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 6-Table 1
Subcell Excavation Depths**

U05		
Q06 23-42 ft.	R06 30-42 ft.	U06 35-42 ft.
Q07 30-42 ft.	R07 35-42 ft.	U07 35-42 ft.
Q08 23-35 ft.	R08 23-42 ft.	U08 23-42 ft.
Q09 10-30 ft.	R09 10-30 ft.	U09 16-30 ft.
Q10 3-16 ft.	R10 3-23 ft.	U10 10-23 ft.
Q11 3-10 ft.	R11 3-16 ft.	U11 10-23 ft.
		V09 10-23 ft.
		V10 10-23 ft.
		V11 10-23 ft.

Notes:
Excavation depths are approximate.
 — Subcell Boundary
 — Cell Boundary

Cell 6-Table 2
Anomaly Sample Results

Sample ID	Date	Location	Depth	Material	Count Rate	Gamma	Neutron	Other	Notes						
Pipe	12/17/2003	R06/R07	2 (L) 2" (dia.)	Metal	1.53	NA	2.84 J	58.91	22,002	<MDA	<MDA	2.897 J	0.098 U	NS	
Pipe	12/13/2003	R06/R07	2" (dia.)	Metal	1.84	NA	1.86	37.02	66,378	NS	NS	10,233 D	0.048 U	NS	
Pipe	12/13/2003	R07	12 (L) 2" (dia.)	Metal	1.20	NA	1.05	17.73	10,454	<MDA	<MDA	1.823	0.101 U	NS	
Pipe	12/13/2003	R07	14 (L) 1.5" (dia.)	Metal	1.58	NA	1.27	43.09	10,577	NS	NS	1.405	0.083 U	NS	
Pipe	12/13/2003	R07	14 (L) 1.5" (dia.)	Metal	0.48	NA	0.30	<3.27	NS	NS	NS	0.408	0.073 U	NS	One gamma count rate for samples 07819, 07821
Pipe	12/13/2003	R07/R07	6" (L) 2" (dia.) with 1.5" union	Metal	1.87	NA	1.43	21.00	16,153	<MDA	<MDA	2.582	0.078 U	NS	
Leaching Pool	12/15/2003	R07	8" (dia.)	Leaching Pool Historic	4.26	NA	11.70	293.12	81,435	293	2236	158,001 D	0.098 U	NS	
Leaching Pool	1/19/2004	R07	8" (dia.)	Leaching Pool Historic	0.25	NA	1.79	28.14	NS	NS	NS	0.0032 J	0.0028 U	NS	One gamma count rate for samples 09000, 09003, 09023. One Alpha and Beta Sensor for samples 09000, 09023, 09029.
Leaching Pool	1/19/2004	R07	8" (dia.)	Leaching Pool Historic	4.38	NA	38.30	726.16	NS	NS	NS	5000	8 U	NS	One gamma count rate for samples 09000, 09003, 09023. One Alpha and Beta Sensor for samples 09000, 09003, 09023.
Leaching Pool	1/19/2004	R07	8" (dia.)	Leaching Pool Historic	11.82	NA	16.07	321.73	NS	NS	NS	2400	1.9 J	NS	
Pipe	1/27/2004	R06	7 (L) 1" (dia.)	Copper	0.83	NA	0.57	7.78	23,000	<MDA	<MDA	1.868	0.104 U	NS	
Pipe	1/27/2004	R06	7 (L) 1" (dia.)	Copper	0.83	NA	0.57	7.78	NS	<MDA	<MDA	1.868	0.104 U	NS	One gamma count rate for samples 09010.
Pipe	1/27/2004	R06	7 (L) 1" (dia.)	Copper	0.83	NA	0.57	7.78	NS	<MDA	<MDA	1.868	0.104 U	NS	One gamma count rate for samples 09010.
Pipe	4/14/2003	R10	4" (dia) Fragments	OmniSurg	1.35	NA	1.08	13.09	36,000	<MDA	<MDA	2.004	0.116 U	NS	Pipe broken into fragments.

Cell 6-Table 2
Anomaly Sample Results

Analyte:	TCE - Trichloroethane
Th-231 - Thorium-231	PCE - Tetrachloroethane
U-234 - Uranium-234	H - Hydrogen
U-235 - Uranium-235	
U-238 - Uranium-238	
Units:	cpm - counts per minute
PCB - polychlorinated biphenyls	dpm/100 cm ² - disintegrations per minute/100 square centimeters
mg/kg - milligram per kilogram	

Qualifiers:
 U - Validation qualifier used to indicate that the result was qualified as non-detect.
 J - Validation qualifier used to indicate that the result is considered as valid.
 D - Validation qualifier used to indicate that analysis was performed on a sample requiring dilution.
 < - Validation qualifier (for on-site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:
 See Cell 6-Figure 2 for sample locations.
 On-site sample results are in picocuries (Th-231 and U-235) and disintegrations per minute (TCE and PCB) by alpha plus microscintillation and gamma ray chromatography by Beta Environmental, Inc.
 NA - Analysis was not performed.
 (BTL) - Results are from Beaman Trend Laboratories, Inc.
 MDA - Minimum Detectable Activity
 Due to an outlier in the laboratory data reporting program, the on-site analytical data should be interpreted as two significant figures.

Cell 6-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q06	A	14915	30.1	0.142	2.07	1.96			
Q06	B	14916	33.5	0.146	1.55	1.55			
Q06	C	14918	32.6	0.33	4.59	4.88			
Q06	D	14920	29.3	0.267	10.3	10.9	0.0026 U	0.0015 J	13.0
Q07	A	14926	37.7	0.151	5.49	4.98	0.0025 U	0.00055 J	3.5 J
Q07	B	14927	39.2	0.088 J	4.45	4.63			
Q07	C	14928	34.9	0.144	0.66	0.59			
Q07	D	14930	37.8	0.187	1.22	1.18			
Q08	A	14937	30.7	0.122	3.59	3.64			
Q08	B	14938	29.1	0.141	8.24	7.98			
Q08	C	14939	25.3	0.083 J	1.06	1.07	0.0025 U	0.0011 J	2.1 J
Q08	D	14940	26.1	0.275	2.88	2.66			
Q09	A	15091	21.0	0.261	0.61	0.53			
Q09	B	15092	18.9	0.188	1.27	1.24			
Q09	C	15093	15.7	0.49	1.44	1.39	0.0026 U	0.0022 J	3.0 J
Q09	D	15094	17.8	0.219	0.64	0.58			
Q10	A	15095	10.2	0.45	2.24	2.30			
Q10	B	15096	8.2	0.53	2.38	2.17	0.0026 U	0.0036	6.6
Q10	C	15097	6.0	0.54	1.29	1.38			
Q10	D	15098	7.5	0.69	1.07	0.80			
Q11	A	15107	5.7	0.65	1.08	1.04			
Q11	B	15108	4.0	0.60	0.301	0.282			
Q11	C	15109	3.7	0.42	0.93	0.84			
Q11	D	15110	4.8	0.59	1.53	0.42	0.0026 U	0.0046	5.0
R06	A	14922	37.7	0.158	2.05	1.82			
R06	B	14923	40.2	0.134	2.43	2.47	0.0025 U	0.00069 J	1.5 J
R06	C	14924	41.2	0.157	10.3	10.5			
R06	D	14925	37.2	0.245	2.49	2.52			
R07	A	14931	42.1	0.140	12.2	11.8			
R07	B	14935	40.8	0.195	9.39	9.57			
R07	C	14936	40.8	0.163	9.11	9.29	0.0025 U	0.00079 J	10.3
R07	D	14941	41.6	0.183	14.2	13.6			
R08	A	14929	39.8	0.227	8.65	8.56	0.0026 U	0.0014 J	2.3 J
R08	B	14932	35.7	0.169	6.84	6.48			
R08	C	14933	29.6	0.159	4.79	4.99			
R08	D	14934	32.9	0.122	8.88	9.72			
R09	A	15103	22.6	0.248	8.27	8.24			
R09	B	15104	20.1	0.253	7.53	7.28			
R09	C	15105	16.9	0.38	5.75	6.15	0.0026 U	0.0011 J	6.3
R09	D	15106	19.4	0.24 J	4.72	4.56			
R10	A	15115	12.2	0.48	2.16	2.50			
R10	B	15116	10.6	0.64	3.17	3.00			
R10	C	15117	7.6	0.82	1.60	2.01	0.0027 U	0.0016 J	7.2
R10	D	15118	8.9	0.47	4.72	4.30			
R11	A	15111	6.0	0.52	1.24	1.27	0.0027 U	0.0050	6.9
R11	B	15112	5.1	0.68	4.51	5.03			

Cell 6-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
R11	C	15113	3.9	0.57	1.0	1.19			
R11	D	15114	3.3	0.49	0.54	0.53			
U06	A	15063	38.6	0.127	14.0	14.5	0.0025 U	0.0025 U	7.3
U06	C	15064	40.7	0.141	6.54	5.43			
U06	D	15065	40.5	0.155	8.09	8.31			
U07	A	15068	40.7	0.235	17.0	17.8	0.0026 U	0.00067 J	7.3
U07	C	15069	39.1	0.290	10.9	11.3			
U07	D	15070	40.6	0.241	7.48	7.49			
U08	A	15083	34.8	0.38	3.70	3.83			
U08	B	15084	30.3	0.129	0.72	0.83			
U08	C	15085	32.0	0.249	2.48	2.42	0.0027 U	0.0019 J	2.9 J
U08	D	15086	35.1	0.276	9.49	9.63			
U09	A	15079	27.2	0.46	6.49	6.57			
U09	B	15080	23.7	0.31	5.24	5.29	0.0026 U	0.0012 J	7.2
U09	C	15081	21.2	0.34	12.6	12.7			
U09	D	15082	23.5	0.42	8.02	8.08			
U10	A	15087	18.5	0.53	3.29	2.94	0.0027 U	0.0025 J	7.5
U10	B	15088	19.1	0.39	4.33	4.35			
U10	C	15089	16.0	0.57	2.27	2.18			
U10	D	15090	14.7	0.51	1.54	1.55			
U11	A	15099	19.0	0.79 J	1.38	1.07			
U11	B	15100	20.3	0.40	0.39	0.315			
U11	C	15101	19.0	0.59	0.77	0.63			
U11	D	15102	16.0	0.54	0.44	0.46	0.0027 U	0.0036	4.9

Cell 6-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232	TCE - Trichloroethene
U-234 - Uranium-234	PCE - Tetrachloroethene
U-238 - Uranium-238	Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 6-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

**Cell 6-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	0.82	7.6	R10
Maximum U-234 (pCi/g)	17	40.7	U07
Maximum U-238 (pCi/g)	17.8	40.7	U07
Maximum TCE (mg/kg)	0.0027 U	7.6	R10
		6.0	R11
		32.0	U08
		18.5	U10
		16.0	U11
Maximum PCE (mg/kg)	0.005	6.0	R11
Maximum Ni (mg/kg)	13	29.3	Q06

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q08	DL01	14303	36.0	0.16		6.33 J			
Q08	DL01	14305	37.0	0.21		9.95 J			
Q08	DL01	14306	38.0	0.18		3.37 UJ			
Q08	DL01	14313	39.0	0.19		6.83 J			
Q08	DL01	14913	40.0	0.191 J	6.78	6.49	0.0026 U	0.0026 U	1.7 J
Q08	DL02	14487	36.0	< 0.05		14.53			
Q08	DL02	14488	37.0	0.22		13.50			
Q08	DL02	14498	38.0	0.54		12.78			
Q08	DL02	14893	39.0	0.147 J	4.49	4.18	0.0026 U	0.0026 U	2.0 J
Q08	DL03	14561	36.0	< 0.03		15.98			
Q08	DL03	14942	37.0	0.118 J	14.8	14.9	0.0026 U	0.0013 J	1.8 J
R06	DL12	13486	41.0	< 0.03		6.62			
R06	DL12	13487	42.0	0.15		8.12			
R06	DL12	13488	43.0	0.23		10.41			
R06	DL12	13489	44.0	0.67		15.84			
R06	DL12	13490	45.0	0.55		14.16			
R06	DL12	13491	46.0	< 0.07		15.56			
R06	DL12	13937	47.0	0.35		17.99			
R06	DL12	13945	48.0	0.22		18.27			
R06	DL12	13950	49.0	0.36		9.81			
R06	DL12	13951	50.0	1.11		14.37			
R06	DL12	13952	51.0	0.41		8.85			
R06	DL12	13956	52.0	0.36		9.28			
R06	DL12	13958	53.0	0.43		9.65			
R06	DL12	13960	54.0	0.56		17.67			
R06	DL12	13962	55.0	0.36		8.47			
R06	DL12	14013	56.0	0.095 J	5.22	5.05	0.0026 U	0.0026 U	0.35 J
R07	DL17	13563	41.0	0.63		11.05			
R07	DL17	13564	42.0	0.18		9.24			
R07	DL17	13565	43.0	0.25		9.54			
R07	DL17	13566	44.0	0.60		37.42			
R07	DL17	13567	45.0	0.62		27.96			
R07	DL17	13568	46.0	0.41		18.76			
R07	DL17	13569	47.0	0.46		19.66			
R07	DL17	13570	48.0	0.44		15.45			
R07	DL17	14093	49.0	0.39		12.46			
R07	DL17	14094	50.0	0.60		27.11			
R07	DL17	14095	51.0	0.55		20.85			
R07	DL17	14096	52.0	0.34		< 5.08			
R07	DL17	14097	53.0	0.24		7.95			
R07	DL17	14098	54.0	0.40		8.68			
R07	DL17	14099	55.0	0.50		< 5.17			
R07	DL17	14100	56.0	0.39	4.62	4.89	0.0026 U	0.0026 U	0.40 J
R07	DL20	13800	41.0	0.19		< 3.62			
R07	DL20	13801	42.0	0.56		3.81			
R07	DL20	13802	43.0	0.18		11.35			
R07	DL20	13803	44.0	0.16		< 3.62			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
R07	DL20	13804	45.0	0.52		11.49			
R07	DL20	13805	46.0	0.66		4.50 J			
R07	DL20	13806	47.0	0.60		8.52			
R07	DL20	13820	48.0	0.55		< 3.34			
R07	DL20	13821	49.0	0.26		4.00 J			
R07	DL20	13822	50.0	0.20		< 2.84			
R07	DL20	13823	51.0	0.33		4.19 J			
R07	DL20	13840	52.0	0.34		< 3.28			
R07	DL20	13841	53.0	< 0.06		< 4.54			
R07	DL20	13842	54.0	0.42		< 3.19			
R07	DL20	13843	55.0	0.43		< 4.41			
R07	DL20	14053	56.0	0.158	0.66	0.52	0.0026 U	0.0026 U	0.64 J
R08	DL01	14517	36.0	0.18		39.55			
R08	DL01	14518	37.0	0.18		22.65			
R08	DL01	14519	38.0	< 0.03		14.52			
R08	DL01	14530	39.0	0.21		28.76			
R08	DL01	14590	40.0	0.19		31.27			
R08	DL01	14591	41.0	0.53		24.67			
R08	DL01	14592	42.0	0.24		23.90			
R08	DL01	14606	43.0	0.26		26.56			
R08	DL01	14864	44.0	0.20		4.66			
R08	DL01	14865	45.0	0.26		4.45 J			
R08	DL01	14912	46.0	0.44	5.60	5.21	0.0027 U	0.0027 U	1.6 J
S05	DL16	11386	41.0	0.18		14.33			
S05	DL16	11388	42.0	0.31		11.95			
S05	DL16	11389	43.0	0.28		27.69			
S05	DL16	11391	44.0	0.19		34.29			
S05	DL16	11392	45.0	0.30		13.11			
S05	DL16	11618	46.0	0.34		7.88			
S05	DL16	11619	47.0	0.41		6.88			
S05	DL16	11620	48.0	0.44		5.68			
S05	DL16	11621	49.0	0.26 J		8.16			
S05	DL16	12053	50.0	0.32	6.12	6.43	0.0026 U	0.0026 U	0.68 J
S05	DL28	11656	41.0	0.13		10.94			
S05	DL28	11657	42.0	0.22		13.74			
S05	DL28	11658	43.0	0.17 J		10.57			
S05	DL28	11659	44.0	0.26		15.11			
S05	DL28	11660	45.0	0.18		25.96			
S05	DL28	11661	46.0	0.34		17.79			
S05	DL28	11662	47.0	0.43 J		14.64			
S05	DL28	11663	48.0	0.35		7.52			
S05	DL28	11664	49.0	0.58 J		21.32			
S05	DL28	12043	50.0	0.32	9.17 J	8.81 J	0.0026 U	0.0026 U	0.36 J
S05	DL29	11637	41.0	0.20		15.49			
S05	DL29	11638	42.0	0.06 UJ		13.03			
S05	DL29	11649	43.0	0.18		28.56			
S05	DL29	11650	44.0	0.25		23.24			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
S05	DL29	11651	45.0	0.30 J		8.72			
S05	DL29	11652	46.0	0.28		10.52			
S05	DL29	11653	47.0	0.29 J		9.26			
S05	DL29	11654	48.0	0.37		8.85			
S05	DL29	11655	49.0	0.38		10.96			
S05	DL29	12049	50.0	0.180	6.62	6.17	0.0026 U	0.0026 U	0.16 J
S05	DL32	12260	40.0	0.31		13.14			
S05	DL32	12263	41.0	0.10		9.09			
S05	DL32	12264	42.0	0.28		< 5.55			
S05	DL32	12265	43.0	0.27 J		22.78			
S05	DL32	12266	44.0	0.20		13.00			
S05	DL32	12267	45.0	0.21 J		22.83			
S05	DL32	12268	46.0	0.42 J		6.23			
S05	DL32	12269	47.0	0.43		< 5.84			
S05	DL32	12270	48.0	0.28 J		12.83			
S05	DL32	12271	49.0	0.47		9.13			
S05	DL32	12281	50.0	0.46		8.62			
S05	DL32	12282	51.0	0.41 J		7.99			
S05	DL32	12283	52.0	0.27		13.41			
S05	DL32	12284	53.0	0.38 J		9.19			
S05	DL32	12289	54.0	0.08 UJ		14.20			
S05	DL32	12290	55.0	0.201	8.46	7.65	0.0033 U	0.0033 UJ	5.3 U
U05	DL01	10268	31.0	0.22		15.94			
U05	DL01	10272	32.0	0.59		49.26			
U05	DL01	10273	33.0	0.27		13.01			
U05	DL01	10275	34.0	0.20		11.45			
U05	DL01	10303	35.0	0.19		15.05			
U05	DL01	10313	36.0	0.19		15.63			
U05	DL01	10325	37.0	0.19		11.66			
U05	DL01	10326	38.0	0.21 J		22.08			
U05	DL01	10328	39.0	0.18 J		14.97			
U05	DL01	10340	40.0	0.072 J	7.63	7.83	0.0026 U	0.0026 U	2.4 J
U05	DL02	10276	31.0	0.24		14.70			
U05	DL02	10280	32.0	0.25		17.67			
U05	DL02	10281	33.0	0.17		12.95			
U05	DL02	10293	34.0	0.19		9.95			
U05	DL02	10295	35.0	0.20		17.61			
U05	DL02	10296	36.0	0.14		10.67			
U05	DL02	10297	37.0	0.23		13.07			
U05	DL02	10299	38.0	0.19		12.53			
U05	DL02	10300	39.0	0.13		7.76			
U05	DL02	10341	40.0	0.095 J	8.04	8.45	0.0026 U	0.0026 U	4.1 U
U05	DL33	12304	40.0	0.40		10.87			
U05	DL33	12305	41.0	0.21 J		11.79			
U05	DL33	12306	42.0	< 0.03		8.77			
U05	DL33	12307	43.0	0.24		11.71			
U05	DL33	12308	44.0	0.15		13.21			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U05	DL33	12318	45.0	0.28 J		24.48			
U05	DL33	12319	46.0	0.35		7.41			
U05	DL33	12320	47.0	0.38 J		8.54			
U05	DL33	12321	48.0	0.41		7.14			
U05	DL33	12322	49.0	0.154 J	5.82	5.74			0.45 J
U06	DL01	13243	41.0	0.37		22.38			
U06	DL01	13244	42.0	0.20		18.52			
U06	DL01	13245	43.0	0.30		30.22			
U06	DL01	13246	44.0	0.43		30.28			
U06	DL01	13247	45.0	0.63 J		24.75			
U06	DL01	13248	46.0	0.56		31.11			
U06	DL01	13819	47.0	0.70		24.35			
U06	DL01	13824	48.0	0.29		20.88			
U06	DL01	14055	49.0	0.24		18.52			
U06	DL01	14056	50.0	0.26		15.06			
U06	DL01	14057	51.0	0.32		13.33			
U06	DL01	14059	52.0	0.22		14.30			
U06	DL01	14061	53.0	0.41		20.24			
U06	DL01	14062	54.0	0.42		18.93			
U06	DL01	14064	55.0	0.47		23.75			
U06	DL01	14051	56.0	0.141	16.0	16.4	0.0026 U	0.0026 U	2.8 J
U06	DL02	13250	41.0	0.21 J		20.50			
U06	DL02	13251	42.0	0.13 J		18.77			
U06	DL02	13252	43.0	0.13		24.12			
U06	DL02	13266	44.0	0.67		38.54			
U06	DL02	13267	45.0	0.40 J		46.21			
U06	DL02	13269	46.0	0.42		29.92			
U06	DL02	13549	47.0	0.56		30.96			
U06	DL02	13551	48.0	0.61		22.83			
U06	DL02	13619	49.0	0.31		21.26			
U06	DL02	13623	50.0	0.32		15.59			
U06	DL02	13654	51.0	0.26		14.20			
U06	DL02	13655	52.0	0.26 J		11.98			
U06	DL02	13658	53.0	0.26		15.87			
U06	DL02	13673	54.0	0.51		15.78			
U06	DL02	13674	55.0	0.39		12.76			
U06	DL02	14052	56.0	0.35	10.5	10.7	0.0026 U	0.0026 U	0.48 J
U06	DL03	13270	41.0	0.28		38.03			
U06	DL03	13272	42.0	0.20		21.92			
U06	DL03	13274	43.0	0.25		24.09			
U06	DL03	13275	44.0	0.20		31.21			
U06	DL03	13277	45.0	0.70 J		75.48			
U06	DL03	13280	46.0	0.40 J		30.03			
U06	DL03	13553	47.0	0.42		26.19			
U06	DL03	13554	48.0	0.50		32.83			
U06	DL03	13626	49.0	0.39		27.49			
U06	DL03	13628	50.0	0.33		23.67			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U06	DL03	13712	51.0	0.39		19.28			
U06	DL03	13713	52.0	0.48		22.55			
U06	DL03	13714	53.0	0.42 J		28.79			
U06	DL03	13715	54.0	0.04 UJ		28.30			
U06	DL03	13716	55.0	0.32		14.08			
U06	DL03	13818	56.0	0.45		11.59			
U06	DL03	13865	57.0	0.57		25.18			
U06	DL03	13866	58.0	0.43		13.46			
U06	DL03	13867	59.0	0.51		16.32			
U06	DL03	13868	60.0	0.39		20.94			
U06	DL03	13873	61.0	0.35		22.38			
U06	DL03	13875	62.0	0.38		21.03			
U06	DL03	13880	63.0	0.43		17.46			
U06	DL03	13892	64.0	0.274	18.5	19.5	0.0026 U	0.0026 U	4.8
U06	DL04	13338	41.0	0.45		34.44			
U06	DL04	13339	42.0	0.32 J		27.00			
U06	DL04	13340	43.0	0.15 J		24.41			
U06	DL04	13341	44.0	0.18		43.12			
U06	DL04	13342	45.0	0.62		38.41			
U06	DL04	13343	46.0	0.44 J		32.35			
U06	DL04	13853	47.0	0.32		18.66			
U06	DL04	13855	48.0	0.39		16.33			
U06	DL04	14022	49.0	0.36		24.47			
U06	DL04	14023	50.0	0.33		22.85			
U06	DL04	14024	51.0	0.34		32.83			
U06	DL04	14025	52.0	0.45		21.82			
U06	DL04	14026	53.0	0.44		18.83			
U06	DL04	14027	54.0	0.40		20.94			
U06	DL04	14028	55.0	0.38		15.24			
U06	DL04	14029	56.0	0.159	11.7	11.5	0.0026 U	0.0026 U	7.0
U06	DL05	13344	41.0	0.26 J		15.14			
U06	DL05	13348	42.0	0.22 J		10.50			
U06	DL05	13350	43.0	0.32		12.52			
U06	DL05	13352	44.0	0.20 J		12.50			
U06	DL05	13353	45.0	0.23 J		18.68			
U06	DL05	13354	46.0	0.47		15.43			
U06	DL05	14002	47.0	0.45		27.89			
U06	DL05	14003	48.0	0.50		29.07			
U06	DL05	14004	49.0	0.41		17.49			
U06	DL05	14007	50.0	0.32		13.06			
U06	DL05	14008	51.0	0.33		11.89			
U06	DL05	14009	52.0	0.20		14.25			
U06	DL05	14010	53.0	0.21		10.11			
U06	DL05	14011	54.0	0.31		9.96			
U06	DL05	14016	55.0	0.42		8.82			
U06	DL05	14020	56.0	0.253	8.38	8.16	0.0026 U	0.0026 U	0.39 J
U06	DL07	13412	41.0	0.19		18.02			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
U06	DL07	13413	42.0	0.37		16.05			
U06	DL07	13414	43.0	0.23		11.38			
U06	DL07	13415	44.0	0.26		23.70			
U06	DL07	13416	45.0	0.33		17.19			
U06	DL07	13417	46.0	0.36		13.42			
U06	DL07	13935	47.0	0.32		10.48			
U06	DL07	13936	48.0	0.72		16.59			
U06	DL07	13964	49.0	0.38		11.63			
U06	DL07	13966	50.0	0.51		12.95			
U06	DL07	13967	51.0	0.28		10.68			
U06	DL07	13969	52.0	0.40		14.83			
U06	DL07	13979	53.0	0.40		10.70			
U06	DL07	13980	54.0	0.36		17.98			
U06	DL07	13981	55.0	0.40		11.43			
U06	DL07	14012	56.0	0.153 J	8.47	8.90	0.0026 U	0.0026 U	1.4 J
U06	DL09	13444	41.0	0.19		17.38			
U06	DL09	13445	42.0	< 0.05		12.79			
U06	DL09	13446	43.0	0.27		10.82			
U06	DL09	13447	44.0	0.35		17.53			
U06	DL09	13448	45.0	0.96		28.70			
U06	DL09	13449	46.0	0.37		24.55			
U06	DL09	13845	47.0	0.57		16.42			
U06	DL09	13847	48.0	0.41		10.47			
U06	DL09	14035	49.0	0.64		10.92			
U06	DL09	14037	50.0	0.55		8.93			
U06	DL09	14038	51.0	0.45		11.83			
U06	DL09	14040	52.0	0.46		12.65			
U06	DL09	14041	53.0	0.45		16.65			
U06	DL09	14043	54.0	0.28		9.49			
U06	DL09	14045	55.0	0.41		10.90			
U06	DL09	14046	56.0	0.39	9.07	8.59	0.0026 U	0.0026 U	0.33 J
U06	DL13	13495	41.0	0.11		13.55			
U06	DL13	13496	42.0	0.13		17.30			
U06	DL13	13497	43.0	0.25		12.45			
U06	DL13	13498	44.0	0.24		14.43			
U06	DL13	13499	45.0	0.38		13.70			
U06	DL13	13500	46.0	< 0.08		7.04			
U06	DL13	13982	47.0	0.43		10.96			
U06	DL13	13983	48.0	0.38		< 4.68			
U06	DL13	13984	49.0	0.52		11.18			
U06	DL13	13985	50.0	0.47		8.14			
U06	DL13	13986	51.0	0.30		< 4.26			
U06	DL13	13987	52.0	0.26		< 3.89			
U06	DL13	13988	53.0	0.42		7.52			
U06	DL13	13989	54.0	0.52		17.30			
U06	DL13	13990	55.0	0.31		7.43			
U06	DL13	14021	56.0	0.23	7.10	7.01	0.0026 U	0.0026 U	0.24 J

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U07	DL06	13355	41.0	0.24 J		21.58			
U07	DL06	13358	42.0	0.25		33.41			
U07	DL06	13359	43.0	0.15		15.17			
U07	DL06	13360	44.0	0.69		29.89			
U07	DL06	13361	45.0	0.48		30.88			
U07	DL06	13362	46.0	0.52		32.42			
U07	DL06	13641	47.0	0.39		25.32			
U07	DL06	13643	48.0	0.50		26.55			
U07	DL06	13644	49.0	0.62		23.94			
U07	DL06	13645	50.0	0.59		22.06			
U07	DL06	13722	51.0	< 0.07		22.82			
U07	DL06	13725	52.0	0.20		24.71			
U07	DL06	13726	53.0	0.35		22.78			
U07	DL06	13728	54.0	0.54 J		24.82			
U07	DL06	13729	55.0	0.47		22.44			
U07	DL06	14054	56.0	0.162	11.2	11.5	0.0026 U	0.0026 U	2.0 J
U07	DL08	13420	41.0	0.51		15.11			
U07	DL08	13421	42.0	0.20		15.43			
U07	DL08	13422	43.0	< 0.03		26.72			
U07	DL08	13423	44.0	0.64		24.41			
U07	DL08	13424	45.0	0.71		32.96			
U07	DL08	13425	46.0	0.57		28.07			
U07	DL08	13555	47.0	0.49		26.06			
U07	DL08	13557	48.0	0.45		22.28			
U07	DL08	13646	49.0	0.43		26.55			
U07	DL08	13647	50.0	0.50		25.88			
U07	DL08	13697	51.0	0.39		29.62			
U07	DL08	13698	52.0	0.41		35.32			
U07	DL08	13699	53.0	0.26		22.28			
U07	DL08	13700	54.0	0.31		20.85			
U07	DL08	13701	55.0	0.34		13.47			
U07	DL08	14047	56.0	0.135	10.6	11.1	0.0026 U	0.0026 U	0.31 J
U07	DL10	13452	41.0	0.24		14.80			
U07	DL10	13453	42.0	0.19		20.31			
U07	DL10	13455	43.0	0.21		15.51			
U07	DL10	13456	44.0	0.68		38.39			
U07	DL10	13457	45.0	0.43		16.49			
U07	DL10	13458	46.0	0.44		16.30			
U07	DL10	14068	47.0	0.37		16.02			
U07	DL10	14074	48.0	0.57		19.45			
U07	DL10	14079	49.0	0.32		18.53			
U07	DL10	14081	50.0	0.39		13.31			
U07	DL10	14082	51.0	0.26		14.13			
U07	DL10	14084	52.0	0.33		12.87			
U07	DL10	14085	53.0	0.48		17.34			
U07	DL10	14086	54.0	0.33		< 3.84			
U07	DL10	14087	55.0	0.34		8.26			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U07	DL10	14090	56.0	0.078 J	5.66	5.79	0.0026 U	0.0026 U	0.41 J
U07	DL11	13459	41.0	0.30		11.49			
U07	DL11	13461	42.0	< 0.04		18.29			
U07	DL11	13462	43.0	0.22		6.31			
U07	DL11	13464	44.0	1.08		21.92			
U07	DL11	13469	45.0	0.76		27.04			
U07	DL11	13470	46.0	0.52		45.83			
U07	DL11	13561	47.0	0.47		18.72			
U07	DL11	13562	48.0	0.52		126.79			
U07	DL11	13648	49.0	0.46		36.72			
U07	DL11	13649	50.0	0.63		102.11			
U07	DL11	13677	51.0	0.57		30.11			
U07	DL11	13678	52.0	0.37		40.72			
U07	DL11	13684	53.0	0.47		37.77			
U07	DL11	13685	54.0	0.72		13.09			
U07	DL11	13687	55.0	0.44 J		11.26			
U07	DL11	13912	56.0	0.16		13.64			
U07	DL11	13917	57.0	0.37		8.41			
U07	DL11	13918	58.0	0.31		17.25			
U07	DL11	13919	59.0	0.46		11.43			
U07	DL11	13920	60.0	0.49		11.09			
U07	DL11	13921	61.0	0.48		12.28			
U07	DL11	13924	62.0	0.41		11.09			
U07	DL11	13926	63.0	0.31		9.83			
U07	DL11	13928	64.0	0.100 J	10.4	10.5	0.0026 U	0.0026 U	1.0 J
U07	DL14	13524	41.0	0.19		17.72			
U07	DL14	13525	42.0	0.20		10.99			
U07	DL14	13526	43.0	0.23		12.32			
U07	DL14	13527	44.0	0.50		23.89			
U07	DL14	13528	45.0	0.43		18.80			
U07	DL14	13529	46.0	0.31		23.14			
U07	DL14	14005	47.0	0.36		20.67			
U07	DL14	14006	48.0	0.44		15.70			
U07	DL14	14017	49.0	0.54		12.11			
U07	DL14	14018	50.0	0.45		12.50			
U07	DL14	14019	51.0	0.51		10.56			
U07	DL14	14030	52.0	0.34		13.70			
U07	DL14	14031	53.0	0.32		10.34			
U07	DL14	14032	54.0	0.38		6.38			
U07	DL14	14033	55.0	0.64		5.16			
U07	DL14	14034	56.0	0.173	5.25	5.13	0.0026 U	0.0026 U	10.2
U07	DL15	13530	41.0	0.24		22.23			
U07	DL15	13531	42.0	0.17		29.11			
U07	DL15	13532	43.0	0.22		22.65			
U07	DL15	13533	44.0	0.96		61.85			
U07	DL15	13534	45.0	0.49		46.40			
U07	DL15	13535	46.0	0.47		19.38			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	U-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
U07	DL15	13825	47.0	0.36		14.99			
U07	DL15	13876	48.0	0.38		13.77			
U07	DL15	13882	49.0	0.41		15.88			
U07	DL15	13883	50.0	0.56		12.68			
U07	DL15	13888	51.0	0.35		19.62			
U07	DL15	13890	52.0	0.33		14.13			
U07	DL15	13891	53.0	0.82		17.02			
U07	DL15	13893	54.0	< 0.04		6.39			
U07	DL15	13895	55.0	0.29		< 4.31			
U07	DL15	13901	56.0	0.42		7.69			
U07	DL15	13902	57.0	0.64		11.28			
U07	DL15	13903	58.0	0.42		6.65			
U07	DL15	13904	59.0	0.40		12.58			
U07	DL15	13909	60.0	0.35		8.21			
U07	DL15	13931	61.0	0.44		< 8.08			
U07	DL15	13932	62.0	0.35		10.97			
U07	DL15	13933	63.0	0.37		11.07			
U07	DL15	13934	64.0	0.151 J	9.28	9.88	0.0026 U	0.0026 U	1.6 J
U07	DL16	13517	41.0	0.25		< 3.29			
U07	DL16	13518	42.0	0.26		< 2.91			
U07	DL16	13519	43.0	0.18		2.46 J			
U07	DL16	13520	44.0	0.19		< 3.11			
U07	DL16	13521	45.0	0.75		< 4.47			
U07	DL16	13522	46.0	0.72		7.30 J			
U07	DL16	13807	47.0	0.51		< 3.64			
U07	DL16	13808	48.0	0.73		6.41 J			
U07	DL16	13809	49.0	0.55		8.66			
U07	DL16	13810	50.0	0.37		13.64			
U07	DL16	13811	51.0	0.45		25.10			
U07	DL16	13812	52.0	0.46		11.61			
U07	DL16	13813	53.0	0.63		24.08			
U07	DL16	13814	54.0	0.48		34.49			
U07	DL16	13826	55.0	0.86		22.05			
U07	DL16	13939	56.0	0.40		6.48			
U07	DL16	14048	57.0	0.161	3.27	3.57	0.0026 U	0.0026 U	0.38 J
U07	DL18	13706	41.0	0.22 J		11.48			
U07	DL18	13707	42.0	0.14		6.80			
U07	DL18	13708	43.0	0.55		6.32			
U07	DL18	13709	44.0	0.68		39.35			
U07	DL18	13710	45.0	0.40 J		23.82			
U07	DL18	13711	46.0	0.29		22.89			
U07	DL18	13719	47.0	0.45		12.65			
U07	DL18	13720	48.0	0.33		21.65			
U07	DL18	13721	49.0	0.38 J		16.57			
U07	DL18	13730	50.0	0.73		15.03			
U07	DL18	13731	51.0	0.06 UJ		16.09			
U07	DL18	13732	52.0	0.62		15.48			

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U07	DL18	13733	53.0	0.37		12.01			
U07	DL18	13734	54.0	0.34		6.04			
U07	DL18	13735	55.0	0.30 J		12.02			
U07	DL18	14050	56.0	0.36	10.9	11.9	0.0029 U	0.0029	1.2 J
U07	DL19	13761	41.0	0.26		7.40 J			
U07	DL19	13763	42.0	0.12		< 3.43			
U07	DL19	13764	43.0	0.69 J		10.70			
U07	DL19	13766	44.0	0.28 J		15.09			
U07	DL19	13767	45.0	0.58		19.64			
U07	DL19	13786	46.0	0.43		5.46			
U07	DL19	13788	47.0	0.66 J		< 5.41			
U07	DL19	13790	48.0	0.59		11.05			
U07	DL19	13791	49.0	0.62		11.39			
U07	DL19	13792	50.0	0.43		15.37			
U07	DL19	13793	51.0	0.37		17.41			
U07	DL19	13794	52.0	0.50 J		33.20			
U07	DL19	13795	53.0	0.47		36.28			
U07	DL19	13796	54.0	0.81		11.84			
U07	DL19	13797	55.0	0.38 J		10.35			
U07	DL19	14049	56.0	0.43	4.29	4.43	0.0026 U	0.0026 U	1.2 J
U08	DL01	14793	32.0	0.16		21.84			
U08	DL01	14794	33.0	0.23		17.54			
U08	DL01	14795	34.0	0.25		19.35			
U08	DL01	14796	35.0	0.29		24.36			
U08	DL01	14797	36.0	0.22		44.47			
U08	DL01	14798	37.0	0.15		15.45			
U08	DL01	14810	38.0	0.17		18.69			
U08	DL01	14811	39.0	0.17		16.82			
U08	DL01	14838	40.0	0.152 J	6.38	6.40	0.0026 U	0.0026 U	4.1 U
U09	DL01	14802	30.0	0.14		16.07			
U09	DL01	14803	31.0	0.12		20.39			
U09	DL01	14804	32.0	0.23		17.67			
U09	DL01	14805	33.0	0.16		14.78			
U09	DL01	14806	34.0	0.22		22.78			
U09	DL01	14807	35.0	0.19		14.63			
U09	DL01	14808	36.0	0.20		8.16			
U09	DL01	14809	37.0	0.28		5.70 J			
U09	DL01	14818	38.0	0.50		6.92			
U09	DL01	14819	39.0	0.18		3.53			
U09	DL01	14839	40.0	0.094 J	33.6	32.5	0.0026 U	0.0026 U	2.8 J

**Cell 6-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232

TCE - Trichloroethene

U-234 - Uranium-234

PCE - Tetrachloroethene

U-238 - Uranium-238

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 6-Figure 6 for boring locations.

DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

Off-Site sample results are in **bold font** and indicate that the analysis was performed by Severn Trent Laboratories, Inc.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.

Boring initially called U06-DL12, subcell was corrected to R06. Boring initially called U07-DL17, subcell was corrected to R07.

**Cell 6-Figure 1
Excavation
Depth Contours**

Legend

- Building
- Property Line
- Subcell Boundaries
- Cell Boundaries

**Excavation Contours
(feet below ground surface)**

- 3.3 - 10.0
- 10.1 - 16.0
- 16.1 - 23.0
- 23.1 - 30.0
- 30.1 - 35.0
- 35.1 - 42.1

Note: Excavation depths are approximate.



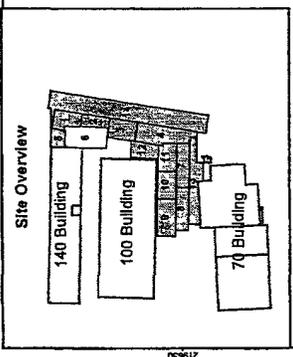
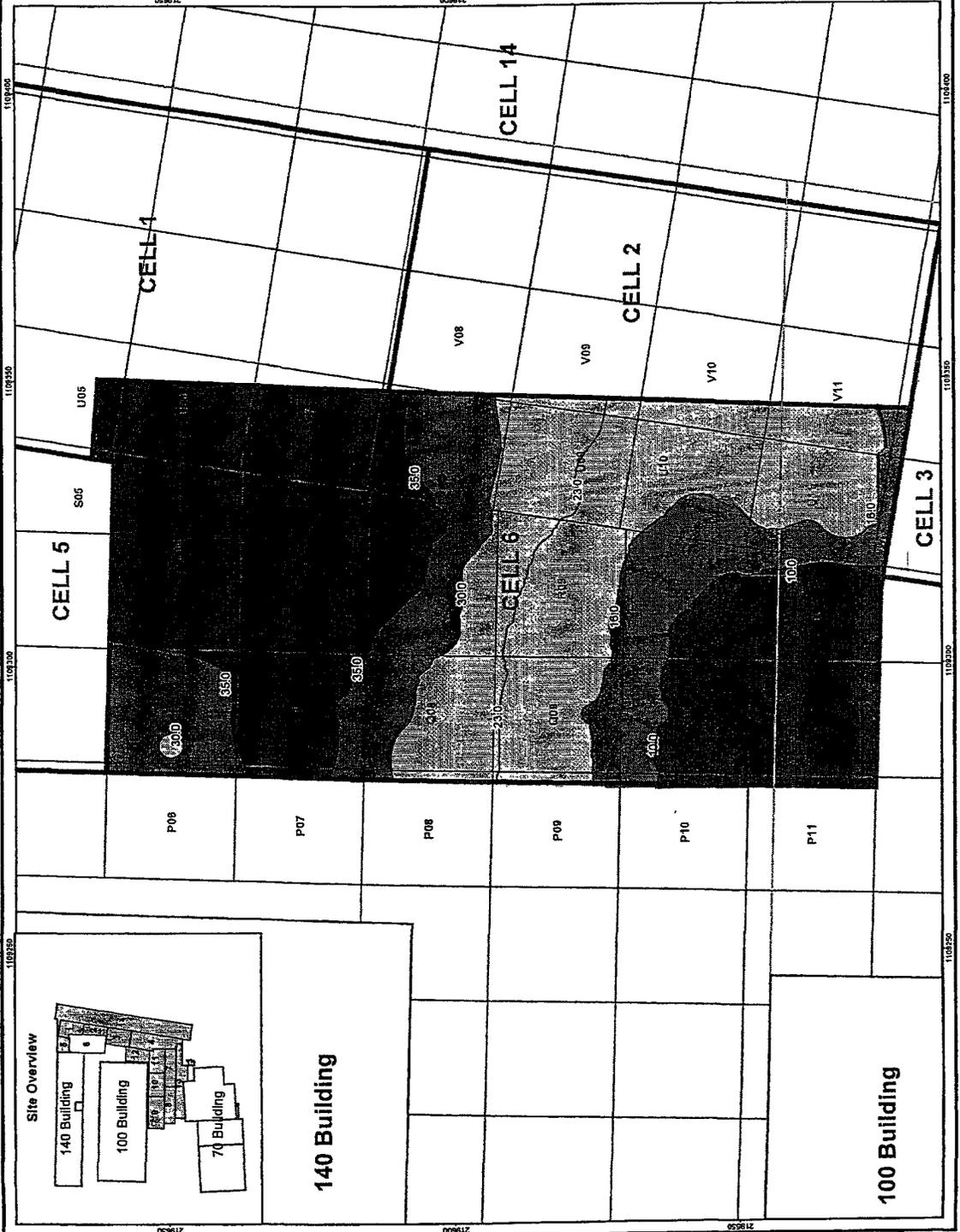
0 10 20
Feet

Photocopy of
State Plane Projection
Long Island Zone
North American Datum 1983
URB27010-039

NYDEC V000861
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

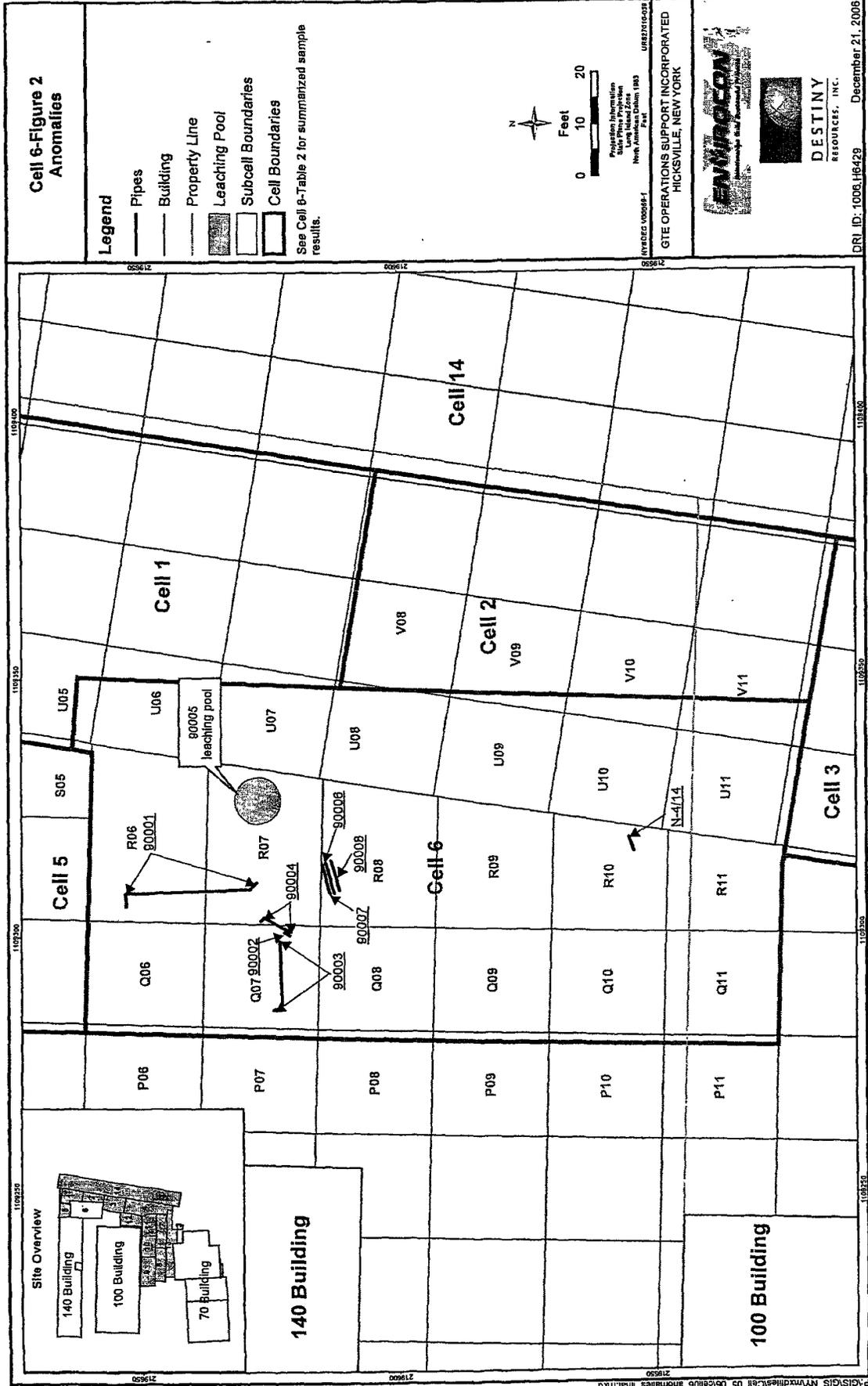


DRI ID: 1006.H6072 December 21, 2006



140 Building

100 Building



**Cell 6-Figure 2
Anomalies**

Legend

- Pipes
- Bulking
- Property Line
- Leaching Pool
- Subcell Boundaries
- Cell Boundaries

See Cell 6-Table 2 for summarized sample results.



Projection Information
State Plane Projection
North American Datum, 1983
Feet
UNRESTRICTED

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



ORI ID: 1008.H6429 December 21, 2008

Cell 6-Figure 3 Post-Excavation Gamma Radiation Walkover Survey Results

Legend

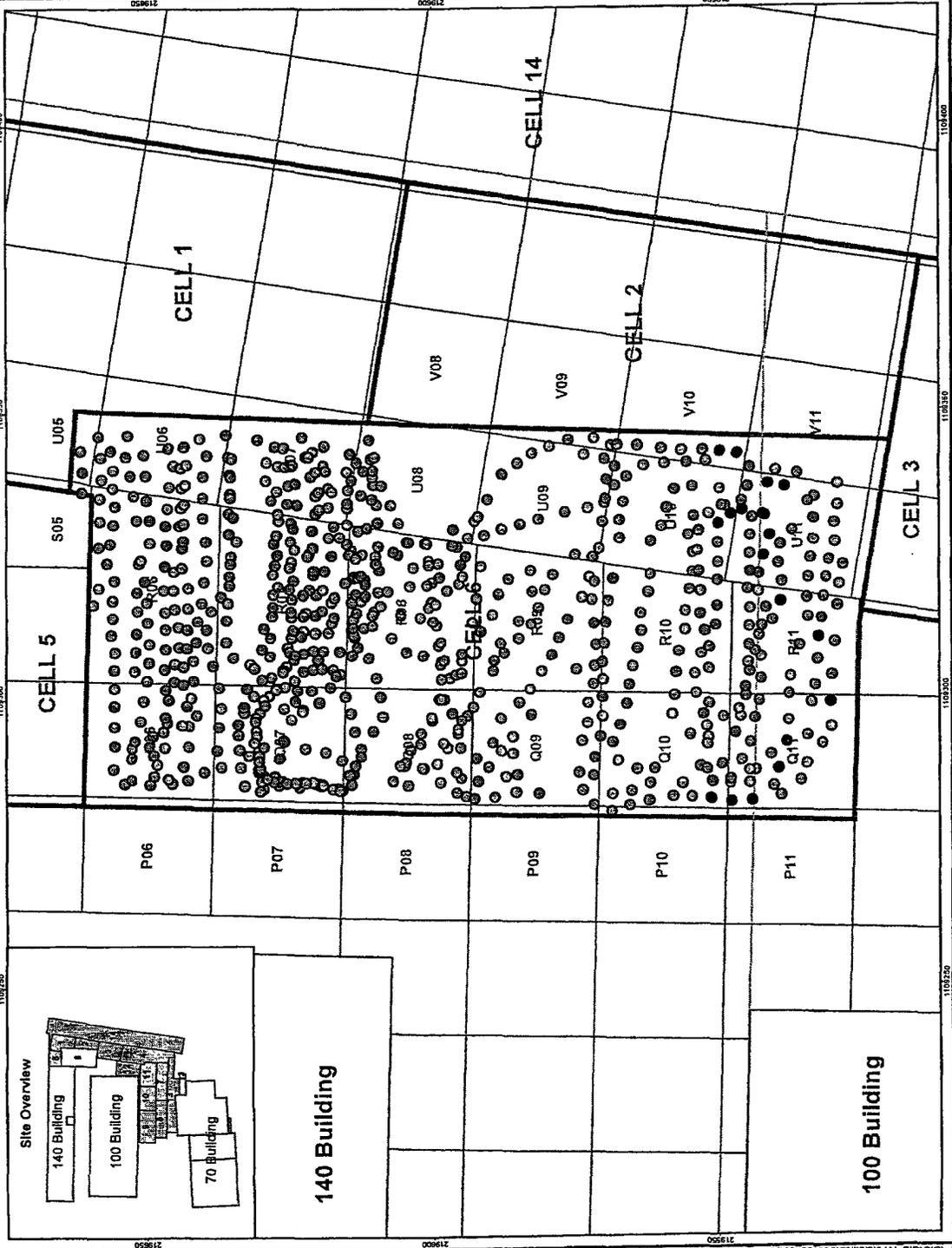
- Lower Population - 70% of data points (0 - 3836 cpm)
- Middle Population - 28% of data points (3837 - 4606 cpm)
- Upper Population - 2% of data points (4607 - 5239 cpm)
- ▭ Building
- ▭ Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

0 10 20
 Feet
 North Arrow
 Prepared by: GTE Operations Support Incorporated
 State of New York
 Long Island Zone
 New York State Datum 1885
 File #
 UR827016-038

GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

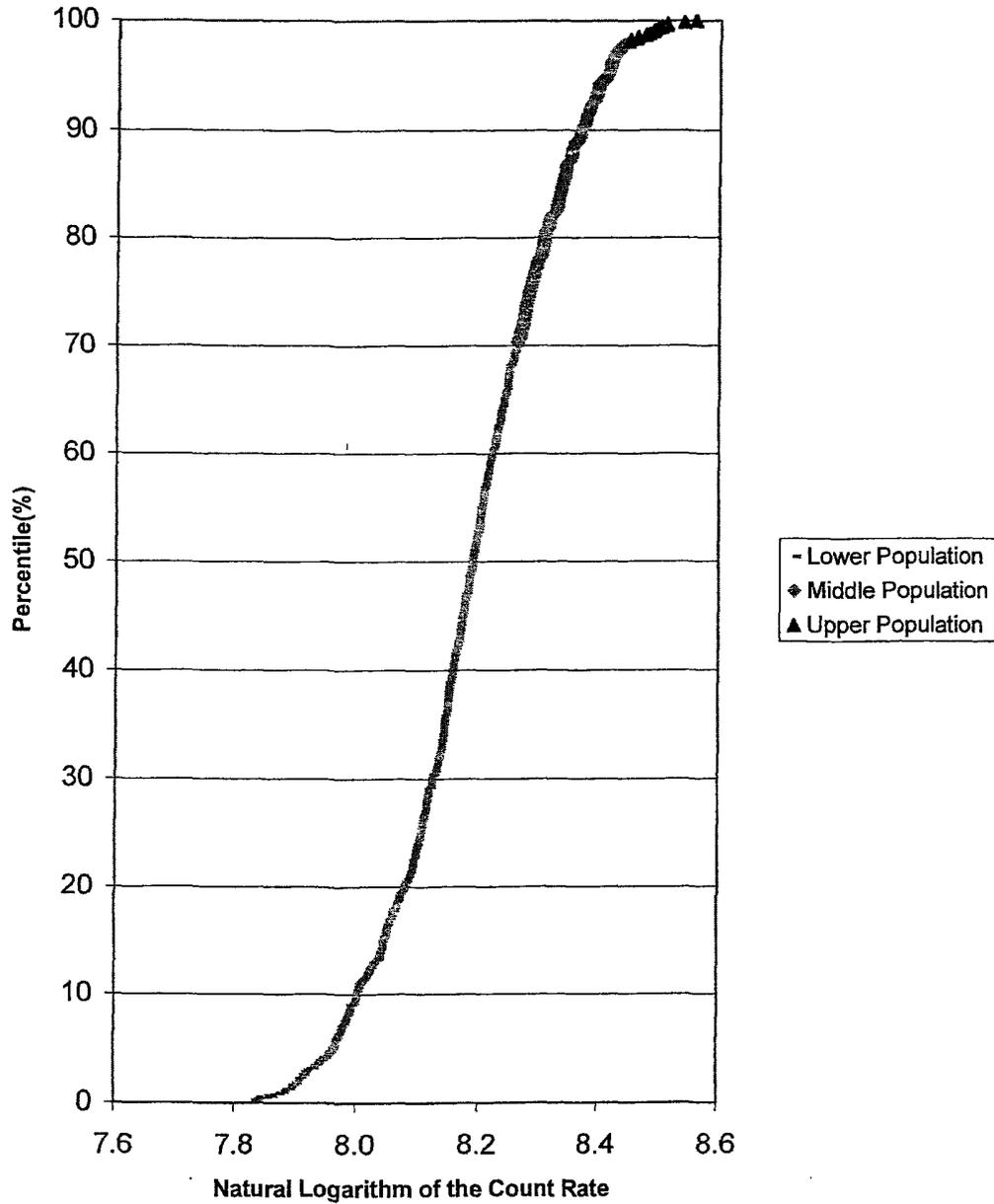

DESTINY
 RESOURCE, INC.

DRL ID: 1005.H8087 December 21, 2005



P:\GIS\GIS N\m\walkover\Cell 05 09\Cell05_walkover.mxd 219500 110250

Cell 6-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



Cell 6-Figure 5 Verification Floor Sample Locations and Results

Legend

- Sample Locations
- ▭ Building
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key

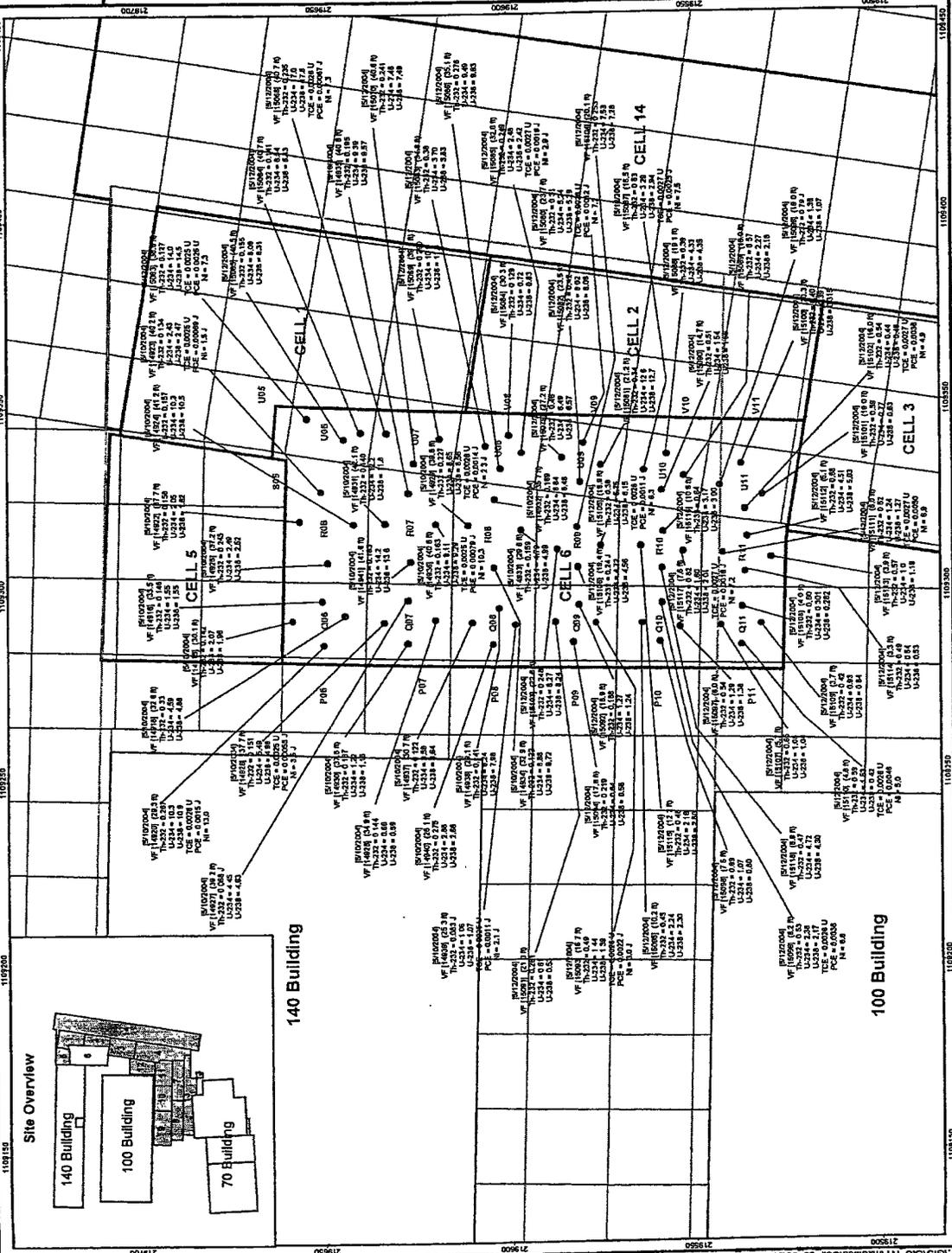
[Date]
Sample Type [Sample ID] (Depth)
Sample Results

-Depth in feet bgs
-Th-232, U-234, and U-238 in pCi/g
-TCE and PCE in mg/kg
-Ni in mg/kg

See Cell 6-Table 3 for summarized sample results.

Feet
0 10 20

Projection Information
North American Datum 1983



Site Overview

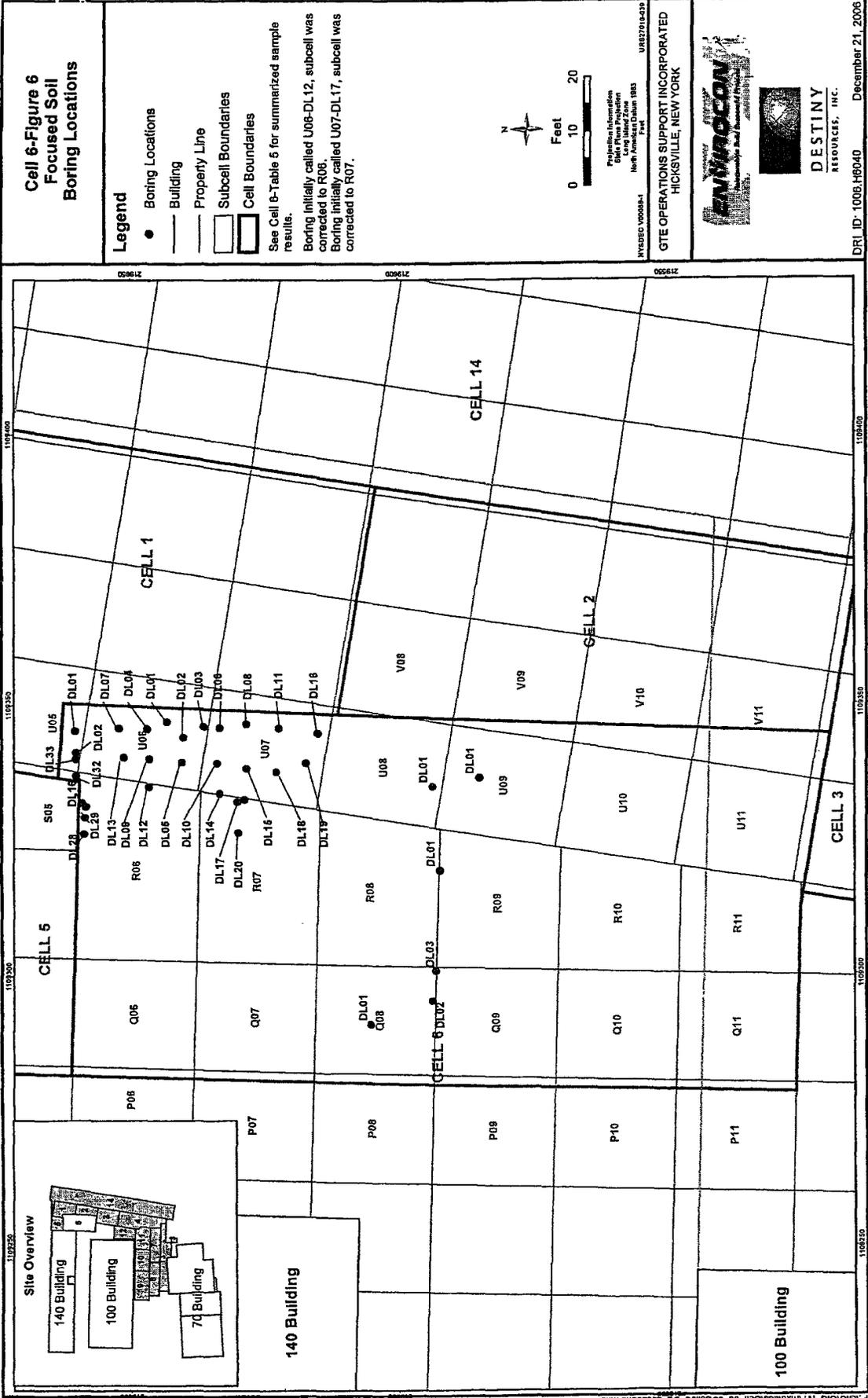
140 Building

100 Building

1108150 1108200 1108250 1108300 1108350 1108400

219500 219550 219600 219650 219700

1108150 1108200 1108250 1108300 1108350 1108400



Bill Hoey

From: Jerry Riggi [jmrigger@gw.dec.state.ny.us]
Sent: Friday, February 04, 2005 11:46 AM
To: billhoey@capecod.net
Subject: Cell 3 and Cell 6

This email will serve as documentation of the verbal approval to backfill Cell 3 and Cell 6. Verbal approval was granted May 18, 2004 and May 19, 2004 respectively.

Jerry Riggi

Jerry M Riggi
NYSDEC
Bureau of Hazardous Waste and Radiation Management
(518) 402-8575
jmrigger@gw.dec.state.ny.us

Attachment A
Page 1 of 1

New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

April 1, 2004

Jean Agostinelli, Project Manager
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

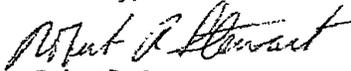
Re: Borrow Soils Report, Spagnoli Road (SPAG2), March 24, 2004
Former Sylvania Electric Products Facility (FSEPF), #V00089-1

Dear Ms. Agostinelli:

I have read the Borrow Soils Report for Spagnoli Road dated March 24, 2004. Based on the results of your samples, the Department has no objections to you using these soils for backfill at the FSEPF site.

I have identified what I believe to be a typographical error in the notes for Table 4 (PCB results). In regard to the results by the Method 8082, it is stated, "Results reported in mg/kg or parts per billion (ppb)." Mg/kg should instead be "µg/kg". If I am incorrect, please notify me.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi
J. Nealon, NYSDOH

Attachment B
Page 1 of 2

GTES0003322

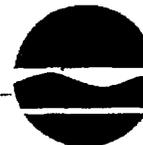
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

July 29, 2004

Jean Agostinelli
Vice President - Contoller
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road
(SPAG2), Melville, NY

Dear Ms. Agostinelli:

I have reviewed the subject report on the borrow soils proposed for use as backfill at the Former Sylvania Electric Product Facility site in Hicksville, site #V00089-1. Based on the sampling results presented in this report, I find the borrow soils at this location to be suitable for use as backfill at the site.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi

Cell 6 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results

The survey unit, Cell 6, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 6 consists of subcells Q06 to Q11, R06 to R11, U09 to U11 and portions of subcells U05 to U08 and V09 to V11. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the floor VF sample results). See section 8.0 of the main report for additional details on the MARSSIM protocol.

This evaluation of Cell 6 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 70 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 70 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 6, (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 70 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 12 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 5 of the report (Attachment page 12) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.31. As is explained in section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 6

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
14915	0.142	2.07	1.96
14916	0.146	1.55	1.55
14918	0.33	4.59	4.88
14920	0.267	10.3	10.9
14926	0.151	5.49	4.98
14927	0.088 J	4.45	4.63
14928	0.144	0.66	0.59
14930	0.187	1.22	1.18
14937	0.122	3.59	3.64
14938	0.141	8.24	7.98
14939	0.083 J	1.06	1.07
14940	0.275	2.88	2.66
15091	0.261	0.61	0.53
15092	0.188	1.27	1.24
15093	0.49	1.44	1.39
15094	0.219	0.64	0.58
15095	0.45	2.24	2.3
15096	0.53	2.38	2.17
15097	0.54	1.29	1.38
15098	0.69	1.07	0.8
15107	0.65	1.08	1.04
15108	0.6	0.301	0.282
15109	0.42	0.93	0.84
15110	0.59	1.53	0.42
14922	0.158	2.05	1.82
14923	0.134	2.43	2.47
14924	0.157	10.3	10.5
14925	0.245	2.49	2.52
14931	0.14	12.2	11.8
14935	0.195	9.39	9.57
14936	0.163	9.11	9.29
14941	0.183	14.2	13.6
14929	0.227	8.65	8.56
14932	0.169	6.84	6.48
14933	0.159	4.79	4.99
14934	0.122	8.88	9.72
15103	0.248	8.27	8.24
15104	0.253	7.53	7.28
15105	0.38	5.75	6.15
15106	0.24 J	4.72	4.56
15115	0.48	2.16	2.5
15116	0.64	3.17	3
15117	0.82	1.6	2.01
15118	0.47	4.72	4.3

Table C.1

Cell 6

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Pb-210 (pCi/g)	Po-210 (pCi/g)	Po-210 (pCi/g)
15111	0.52	1.24	1.27
15112	0.68	4.51	5.03
15113	0.57	1	1.19
15114	0.49	0.54	0.53
15063	0.127	14	14.5
15064	0.141	6.54	5.43
15065	0.155	8.09	8.31
15068	0.235	17	17.8
15069	0.29	10.9	11.3
15070	0.241	7.48	7.49
15083	0.38	3.7	3.83
15084	0.129	0.72	0.83
15085	0.249	2.48	2.42
15086	0.276	9.49	9.63
15079	0.46	6.49	6.57
15080	0.31	5.24	5.29
15081	0.34	12.6	12.7
15082	0.42	8.02	8.08
15087	0.53	3.29	2.94
15088	0.39	4.33	4.35
15089	0.57	2.27	2.18
15090	0.51	1.54	1.55
15099	0.79 J	1.38	1.07
15100	0.4	0.39	0.315
15101	0.59	0.77	0.63
15102	0.54	0.44	0.46

Notes:

Cell area = 860 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
				U-234	Surface Soil
3,000	1.01				
1,000	1.04				
300	1.43				
100	2.27				
30	5.73				
10	11.1				
3	18.3				
1	30.5				
U-238	Surface Soil	50.00	No		
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

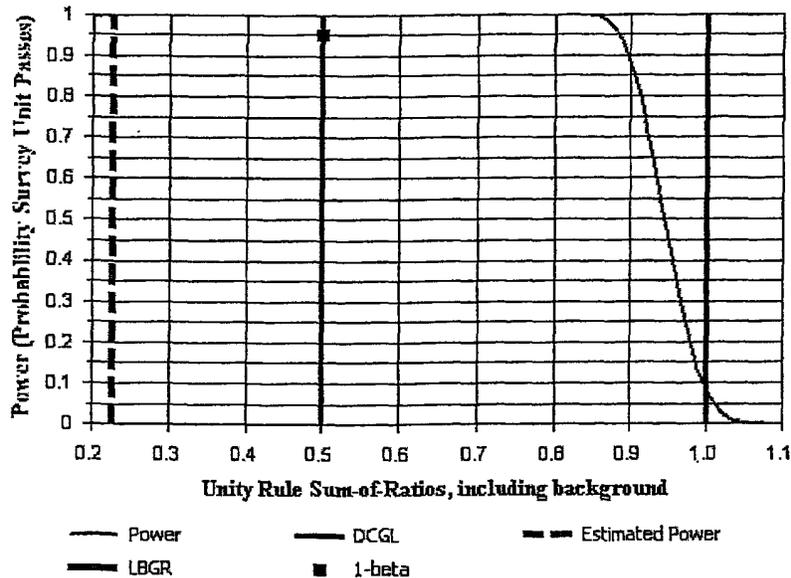


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 6 with STL Data		
Comments:			
Area (m ²):	860	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.11
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.23
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.3 \pm 0.2	N/A
U-234	3 \pm 3	N/A
U-238	3 \pm 3	N/A

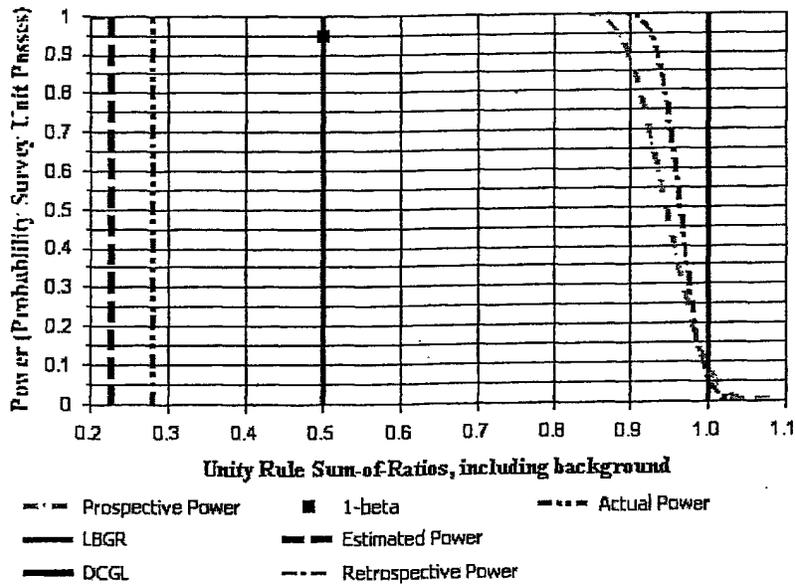


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 6 with STL Data
Report Number: 1
Survey Unit Samples: 70
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: *Reject Null Hypothesis (Survey Unit PASSES)*

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
14915	S	0.14	2.07	1.96
14916	S	0.15	1.55	1.55
14918	S	0.33	4.59	4.88
14920	S	0.27	10.3	10.9
14926	S	0.15	5.49	4.98
14927	S	0.09	4.45	4.63
14928	S	0.14	0.66	0.59
14930	S	0.19	1.22	1.18
14937	S	0.12	3.59	3.64
14938	S	0.14	8.24	7.98
14939	S	0.08	1.06	1.07
14940	S	0.28	2.88	2.66
15091	S	0.26	0.61	0.53
15092	S	0.19	1.27	1.24
15093	S	0.49	1.44	1.39
15094	S	0.22	0.64	0.58
15095	S	0.45	2.24	2.3
15096	S	0.53	2.38	2.17
15097	S	0.54	1.29	1.38
15098	S	0.69	1.07	0.8
15107	S	0.65	1.08	1.04
15108	S	0.6	0.3	0.28
15109	S	0.42	0.93	0.84
15110	S	0.59	1.53	0.42
14922	S	0.16	2.05	1.82
14923	S	0.13	2.43	2.47
14924	S	0.16	10.3	10.5
14925	S	0.24	2.49	2.52
14931	S	0.14	12.2	11.8
14935	S	0.2	9.39	9.57
14936	S	0.16	9.11	9.29
14941	S	0.18	14.2	13.6
14929	S	0.23	8.65	8.56
14932	S	0.17	6.84	6.48
14933	S	0.16	4.79	4.99
14934	S	0.12	8.88	9.72
15103	S	0.25	8.27	8.24
15104	S	0.25	7.53	7.28
15105	S	0.38	5.75	6.15
15106	S	0.24	4.72	4.56
15115	S	0.48	2.16	2.5
15116	S	0.64	3.17	3
15117	S	0.82	1.6	2.01
15118	S	0.47	4.72	4.3
15111	S	0.52	1.24	1.27
15112	S	0.68	4.51	5.03
15113	S	0.57	1	1.19
15114	S	0.49	0.54	0.53
15063	S	0.13	14	14.5
15064	S	0.14	6.54	5.43
15065	S	0.16	8.09	8.31



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
15068	S	0.24	17	17.8
15069	S	0.29	10.9	11.3
15070	S	0.24	7.48	7.49
15083	S	0.38	3.7	3.83
15084	S	0.13	0.72	0.83
15085	S	0.25	2.48	2.42
15086	S	0.28	9.49	9.63
15079	S	0.46	6.49	6.57
15080	S	0.31	5.24	5.29
15081	S	0.34	12.6	12.7
15082	S	0.42	8.02	8.08
15087	S	0.53	3.29	2.94
15088	S	0.39	4.33	4.35
15089	S	0.57	2.27	2.18
15090	S	0.51	1.54	1.55
15099	S	0.79	1.38	1.07
15100	S	0.4	0.39	0.32
15101	S	0.59	0.77	0.63
15102	S	0.54	0.44	0.46

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
14915	S	0.13
14916	S	0.11
14918	S	0.31
14920	S	0.52
14926	S	0.26
14927	S	0.21
14928	S	0.08
14930	S	0.11
14937	S	0.19
14938	S	0.37
14939	S	0.07
14940	S	0.21
15091	S	0.12
15092	S	0.12
15093	S	0.23
15094	S	0.1
15095	S	0.25
15096	S	0.28
15097	S	0.25
15098	S	0.28
15107	S	0.27



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
15108	S	0.23
15109	S	0.19
15110	S	0.25
14922	S	0.13
14923	S	0.15
14924	S	0.47
14925	S	0.19
14931	S	0.53
14935	S	0.45
14936	S	0.43
14941	S	0.62
14929	S	0.43
14932	S	0.33
14933	S	0.25
14934	S	0.42
15103	S	0.42
15104	S	0.39
15105	S	0.37
15106	S	0.27
15115	S	0.26
15116	S	0.35
15117	S	0.37
15118	S	0.35
15111	S	0.24
15112	S	0.43
15113	S	0.25
15114	S	0.2
15063	S	0.62
15064	S	0.29
15065	S	0.38
15068	S	0.78
15069	S	0.55
15070	S	0.39
15083	S	0.29
15084	S	0.08
15085	S	0.19
15086	S	0.48
15079	S	0.43
15080	S	0.32
15081	S	0.63
15082	S	0.47
15087	S	0.31
15088	S	0.31
15089	S	0.29
15090	S	0.24
15099	S	0.33
15100	S	0.16
15101	S	0.24
15102	S	0.21



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	70	N/A	N=13
Mean (SOR)	0.31	N/A	0.23
Median (SOR)	0.28	N/A	N/A
Std Dev (SOR)	0.15	N/A	0.11
High Value (SOR)	0.78	N/A	N/A
Low Value (SOR)	0.07	N/A	N/A

Cell 7 Status Report

INTRODUCTION

Cell 7 is comprised of subcells K22 to Q22 and K23 to Q23 and is located on the southeast side of the 100 Property and the north side of the 70 Property (Cell 7-Figure 1 and Figure 6 in Volume I). Excavation of Cell 7 began on August 5, 2003 and was completed on October 6, 2003. Verbal approval to backfill Cell 7 was received from NYSDEC representatives on October 6, 2003 and documented in an e-mail on October 6, 2003 (Cell 7-Attachment A). A formal request to backfill Cell 7 was submitted in a report to NYSDEC titled *Cell 7 – Attainment of Radiological and Chemical Clean-up Levels* dated November 20, 2003. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 7 was backfilled beginning October 10, 2003 and was completed on October 21, 2003. The soils used for backfill came from the 111 Pit (North and South) in Hauppauge, New York. Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at each backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling – 111 Pit, JDP Stock Pile 2, and Commack*, dated October 17, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated October 27, 2003 (Cell 7-Attachment B).

DEPTHS OF EXCAVATION

Cell 7 was excavated to depths ranging from ground surface to approximately 24 ft bgs. The excavation depths for each subcell are provided in Cell 7-Table 1 and are shown on Cell 7-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 11,689,650 pounds of soil and debris (557 Lift LinersTM) were removed from Cell 7 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 7, various anomalies were encountered. The anomalies were pieces of pipe and a drum remnant. A list of Cell 7 anomalies along with analytical results from anomaly samples is provided in Cell 7-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 7-Figure 2. All of the anomalies encountered during the excavation activities in Cell 7 were sized to fit and placed in Lift LinersTM and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 7, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 7-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 7-Figure 4 depicts a CFD plot of the 521 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 7-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluation are provided in Cell 7-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the following exceptions:

- M23 - the C sample;
- N23 - the C sample;
- O23 - the B and C samples; and
- P23 - the C sample.

These locations were inaccessible for VF sampling as these locations were all located in areas with a steep slope. In addition to the floor samples, an additional 100 VF samples were collected from the walls or at the joint of a wall and floor (Cell 7-Figures 6a and 6b).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Elevated radiological concentrations were found in soils in Cell 11, to the north of Cell 7 (Cell 7-Figure 1). These elevated concentrations were below the final excavation depths of Cell 7. To complete the horizontal and vertical delineation of the contamination identified in Cell 11, focused soil sampling was conducted in four locations in Cell 7, subcells O22 and P22 (Cell 7-Figure 7).

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 7-Table 3 and are shown on Cell 7-Figure 5. Cell 7-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor and wall samples. The radiological, PCE, TCE, and nickel results for STL analyses of the VF wall samples are provided in Cell 7-Table 5 and are shown on Cell 7-Figures 6a and 6b. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the focused soil samples are provided in Cell 7-Table 6 and the boring locations are shown on Cell 7-Figure 7.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. With the exception of one VF wall sample in P23, all sample results were less than the cleanup levels³. The P23 VF wall sample result was 51.5 pCi/g for U-238. The survey unit, Cell 7, passed this evaluation (Cell 7-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the radiological and chemical Site cleanup levels were attained for Cell 7.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ Note: As described in the *Verification Sampling* Section above and in Section 8.0 of Volume I, confirmation that radiological cleanup levels were attained was accomplished using the methods described in the MARSSIM and the results of the VF floor samples. Since the wall samples are not collected in a manner consistent with the MARSSIM, the sample results are not evaluated using the MARSSIM. However, the MARSSIM protocols allow a number of individual sample results to exceed a cleanup level and still conclude that the area sampled is below applicable radiological cleanup levels.

Tables

- Cell 7-Table 1: Cell 7 Subcell Excavation Depths
- Cell 7-Table 2: Cell 7 Anomaly Sample Results
- Cell 7-Table 3: Cell 7 Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.
- Cell 7-Table 4: Cell 7 Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.
- Cell 7-Table 5: Cell 7 Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.
- Cell 7-Table 6: Cell 7 Focused Soil Boring Sample Results

Figures

- Cell 7-Figure 1: Cell 7 Excavation Depth Contours
- Cell 7-Figure 2: Cell 7 Anomalies
- Cell 7-Figure 3: Cell 7 Post-Excavation Gamma Radiation Walkover Survey Results
- Cell 7-Figure 4: Cumulative Frequency Distribution for Cell 7
Gamma Radiation Walkover Survey Data
- Cell 7-Figure 5: Cell 7 Floor Verification Sample Locations and Results
- Cell 7-Figure 6a: Cell 7 (Subcells K22 to M22 and K23 to M23) Verification
Wall Sample Locations and Results
- Cell 7-Figure 6b: Cell 7 (Subcells N22 to Q22 and N23 to Q23) Verification
Wall Sample Locations and Results
- Cell 7-Figure 7: Cell 7 Focused Soil Boring Locations

Attachments

- Cell 7-Attachment A: E-Mail from NYSDEC to GTEOSI dated October 6, 2003
- Cell 7-Attachment B: Letters from NYSDEC to GTEOSI dated October 27, 2003
- Cell 7-Attachment C: Cell 7 MARSSIM Evaluation Results Using
Severn Trent Laboratory, Inc. Sample Results

**Cell 7-Table 1
Subcell Excavation Depths**

Cell 10			Cell 11				Cell 4
K22	L22	M22	N22	O22	P22	Q22	
14-24 ft.	10-24 ft.	14-24 ft.	4-24 ft.	14-24 ft.	14-24 ft.	10-24 ft.	
K23	L23	M23	N23	O23	P23	Q23	
4-18 ft.	0-18 ft.	0-18 ft.	0-24 ft.	0-24 ft.	0-24 ft.	0-24 ft.	
Cell 13							

Notes:
Excavation depths are approximate.
 Subcell Boundary
 Cell Boundary

**Cell 7-Table 2
Anomaly Sample Results**

Pipe	ID	Material	Sample Location	Sample Depth	Sample Type	On-Site Alpha-Beta (AP) Results			On-Site Gamma (G) Results			Off-Site Alpha-Beta (AP) Results			Off-Site Gamma (G) Results		
						Count	Rate (cpm)	Rate (dpm/100 cm ²)	Count	Rate (cpm)	Rate (dpm/100 cm ²)	Count	Rate (cpm)	Rate (dpm/100 cm ²)	Count	Rate (cpm)	Rate (dpm/100 cm ²)
Pipe	9172003	A-912	Q22	86" (1.4" dia.)	Under Pipe	14	14	NA	2.26	3179	>50,000	NS	NS	0.027 J	0.0009 J	NS	NS
Pipe	NS	B-913	P22	4" (dia.) X 8' (L)	NS	9	NS	NS	NS	NS	250,000 Outside of Drum	NS	NS	NS	NS	NS	NS
Pipe	NS	B-918	Q22	4" (dia.)	NS	4 to 5.5	NS	NS	NS	NS	24,000	NS	NS	NS	NS	NS	NS
Drum Remnant	NS	TA-913	P22	4" (dia.)	NS	9	NS	NS	NS	NS	250,000 Outside of Drum, 340,000 Inside	NS	NS	NS	NS	NS	NS

Analytes:
 Th-232 - Thorium-232
 U-234 - Uranium-234
 U-235 - Uranium-235
 U-238 - Uranium-238
 TCE - Trichloroethene
 PCE - Tetrachloroethene
 M - Nickel

Units:
 pCi/g - picocurie/gram
 mg/kg - milligram/kilogram
 cpm - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Qualifiers:
 J - Validation qualifier used to indicate that the result is considered an estimate

Notes:
 See Cell 7-Figure 2 for sample locations.
 Samples were analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectrometry system
 NA - Analysis was not performed
 NS - Not sampled.
 (STL) - Results are from Severn Trent Laboratories, Inc.
 Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Cell 7-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
K22	A	03471	18.6	0.15 U	3.78	2.87			
K22	B	03472	18.4	0.15 U	1.60	2.10	0.0027 U	0.0027 UJ	8.1
K22	C	03473	18.2	0.27 J	3.25	2.48			
K22	D	03474	18.3	0.090 J	3.33	2.86			
K23	A	03475	16.2	0.11 U	1.63	1.56			
K23	B	03476	15.9	0.17 J	0.74	0.85			
K23	C	03477	16.3	0.16 J	0.43	0.52	0.0026 U	0.0026 UJ	2.5 J
K23	D	03478	13.8	0.22 J	3.03	2.76			
L22	B	03743	14.2	0.19 J	5.98	6.44	0.0025 U	0.0025 UJ	1.5 J
L22	A	03750	18.2	0.14 J	1.59	0.95			
L22	C	03751	14.6	0.17 J	2.74	2.49			
L22	D	03752	13.7	0.38 J	5.54	5.50			
L23	A	03737	14.8	0.17 J	2.33	2.69	0.0025 U	0.0025 U	4 U
L23	B	03742	15.3	0.22 J	0.59	0.43			
L23	C	03753	14.2	0.106 J	0.29 J	0.24 J			
L23	D	03754	14.0	0.16 U	0.50	0.59			
M22	B	04171	19.3	0.14 J	5.79	6.50	0.0025 U	0.0025 U	2.1 J
M22	A	04172	18.9	0.34 J	11.4	11.2			
M22	C	04174	17.2	0.15 J	6.02	5.82			
M22	D	04176	19.2	0.27 J	7.28	7.61			
M23	A	04177	18.0	0.13 J	2.74	2.74	0.0025 U	0.0025 U	1.0 J
M23	B	04178	16.6	0.35 J	3.29	3.07			
M23	D	04179	17.1	0.119 J	2.04	2.21			
N22	A	04871	19.7	1.17	3.42	2.35	0.0026 U	0.00081 J	5.7
N22	B	04874	18.2	0.44	1.96	2.16			
N22	C	04875	18.4	0.29 J	1.53	1.44 J			
N22	D	04877	18.9	0.43	3.64	3.25			
N23	A	04834	17.8	0.27 J	3.51	3.69	0.0025 U	0.00024 J	6.6
N23	B	04838	18.5	0.17 J	1.18	1.22			
N23	D	04839	18.2	0.32 J	3.83	3.03			
O22	A	04869	20.1	0.092 J	2.29	0.17			
O22	B	04870	21.1	0.49	2.17	1.76 J	0.0027 U	0.0030	1.9 J
O22	C	04872	18.5	0.26 J	1.42	1.25 J			
O22	D	04873	19.5	0.45	2.26	1.80 J			
O23	A	04857	18.6	0.15 U	2.03	1.73			
O23	D	04859	18.0	0.20 J	4.27	3.95	0.0025 U	0.0025 U	4 U
P22	A	05280	20.2	1.13	0.81 J	0.66			
P22	B	05281	20.6	1.10	0.80 J	0.47 U			
P22	C	04851	19.5	0.24 J	2.68	2.11			
P22	D	05282	19.5	1.08	1.09	0.77	0.0025 U	0.018 J	4.0
P23	A	04863	18.8	0.16 J	1.67	1.28 J			
P23	B	04865	18.8	0.33 J	12.2	12.6	0.0026 U	0.0013 J	4.1 U
P23	D	04866	19.0	0.25 J	8.01	8.85			
Q22	A	05289	21.7	1.07	2.09	1.57			

Cell 7-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q22	B	05290	18.8	0.82	0.65 J	0.62			
Q22	C	05291	20.8	0.14 U	1.29	1.31	0.0026 U	0.0026 U	4.1 U
Q22	D	05292	23.6	1.06	1.41	1.16			
Q23	A	05300	13.5	0.20 J	1.99	1.67	0.0025 U	0.0025 U	4.1 U
Q23	B	05301	8.1	1.18	10.9	9.5			
Q23	C	05302	4.9	0.51	0.71	0.74			
Q23	D	05303	13.3	0.22 J	5.78	5.28			

Cell 7-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

TCE - Trichloroethene

U-234 - Uranium-234

PCE - Tetrachloroethene

U-238 - Uranium-238

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 7-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

Cell 7-Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.

Analyte	VF Type	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	Floor	1.18	8.1	Q23
	Wall	1.40	8.0	L23
Maximum U-234 (pCi/g)	Floor	12.2	18.8	P23
	Wall	47.8	10.7	P23
Maximum U-238 (pCi/g)	Floor	12.6	18.8	P23
	Wall	51.5	10.7	P23
Maximum TCE (mg/kg)	Floor	0.0027 U	18.4 21.1	K22 O22
	Wall	0.057	15.5	N22
Maximum PCE (mg/kg)	Floor	0.018 J	19.5	P22
	Wall	0.083	18.6	O23
Maximum Ni (mg/kg)	Floor	8.1	18.4	K22
	Wall	15.0	15.8	K23

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Cell 7-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
K22	03725	18.4	0.17 J	3.17	3.34	0.0026 U	0.0026 UJ	8.1
K22	03727	18.3	0.32 J	3.91	3.31	0.0026 U	0.0026 UJ	2.3 J
K22	03728	17.2	0.058 J	1.15	0.75	0.0025 U	0.0025 UJ	1.9 J
K22	03736	16.5	0.097 J	1.37	1.16	0.0026 U	0.0026 U	7.8
K22	03738	17.9	0.19 J	1.74	1.67	0.0025 U	0.0025 U	4.8
K22	03740	17.7	0.26 J	2.78	2.52	0.0025 U	0.0025 U	4.1
K23	03726	14.0	0.15 J	4.75	4.53	0.0025 U	0.0025 UJ	12.8
K23	03730	14.6	0.28 J	1.27	1.15	0.0025 U	0.0025 UJ	4.0 J
K23	03731	16.2	0.14 U	1.57	1.35	0.0026 U	0.0026 U	2.7 J
K23	03732	14.1	0.17 J	1.40	1.47	0.0025 U	0.0025 U	3.2 J
K23	03733	15.9	0.31 J	3.32	2.48	0.0025 U	0.0025 U	4.4
K23	03734	13.4	0.100 J	2.29	1.51	0.0026 U	0.0026 U	8.5
K23	03735	15.8	0.21 J	3.08	3.39	0.0026 U	0.0026 U	15.0
K23	03769	15.4	0.25 J	0.32 J	0.44	0.0026 U	0.0026 U	4.1 U
K23	03770	11.8	0.36 J	0.48	0.37 J	0.0025 U	0.0025 U	4.3
K23	03771	9.4	0.42	0.84	0.50	0.0025 U	0.0025 U	2.8 J
K23	03772	7.9	1.21	1.18	0.79	0.0031 U	0.00043 J	13.1
L22	03739	16.4	0.23 J	2.60	2.39	0.0025 U	0.0025 UJ	2.5 J
L22	03741	15.1	0.099 U	2.69	3.24	0.0025 U	0.0025 U	3.3 J
L22	03744	17.3	0.16 J	15.4	14.9	0.0025 U	0.0025 UJ	1.3 J
L22	03745	15.5	0.25 J	3.68	3.92	0.0025 U	0.0025 U	4.1 U
L22	03746	18.3	0.15 J	4.11	3.53	0.0025 U	0.0025 U	0.36 J
L22	03747	15.3	0.30 J	14.8	15.9	0.0026 U	0.0026 UJ	4.2
L22	03748	16.9	0.17 J	3.55	3.01	0.0025 U	0.0025 UJ	0.69 J
L22	03749	17.3	0.22 J	2.58	2.62	0.0026 U	0.0026 UJ	0.93 J
L22	04880	20.1	0.087 U	0.69 J	0.51 J	0.0025 U	0.0025 U	4 U
L22	04882	17.6	0.17 J	2.29	2.19	0.0025 U	0.0025 U	4 U
L22	04883	18.8	1.25	1.84	1.44 J	0.0025 U	0.0025 U	4 U
L22	04884	16.5	0.064 U	2.32	2.73	0.0025 U	0.0025 U	4 U
L23	03773	13.8	0.16 J	0.51 J	0.22 J	0.0026 U	0.0026 U	4.1 U
L23	03774	10.2	0.29 J	0.48 J	0.37 J	0.0025 U	0.0025 U	2.2 J
L23	03775	7.1	1.37	3.15	3.02	0.0029 U	0.0029 U	8.6
L23	03776	14.5	0.111 J	1.59	2.04	0.0026 U	0.0026 U	4.1 U
L23	03777	11.4	0.18 J	0.32 J	0.43	0.0026 U	0.0026 U	2.0 J
L23	03779	8.0	1.40	0.98	1.15	0.0032 U	0.0032 U	14.8
L23	03781	5.4	0.37 J	1.05	0.72	0.0028 U	0.0028 U	3.6 J
L23	03783	6.7	0.60	1.34	1.03	0.0031 U	0.0031 UJ	4.7 J
M23	04180	16.9	0.36 J	3.65	3.53	0.0025 U	0.0025 U	1.9 J
M23	04181	13.8	0.16 U	2.14	2.01	0.0025 U	0.0025 U	2.6 J
M23	04182	10.7	0.48	1.90	1.65	0.0027 U	0.0027 U	2.3 J
M23	04183	7.8	0.30 J	2.96	3.27	0.0025 U	0.0025 U	2.8 J
M23	04185	16.5	0.13 U	2.38	2.36	0.0025 U	0.0025 U	1.5 J
M23	04186	13.1	0.30 J	2.70	2.49	0.0025 U	0.0025 U	1.5 J
M23	04187	10.7	0.34 J	5.39	5.33	0.0025 U	0.0025 U	2.1 J
M23	04189	7.5	0.19 J	2.48	2.12	0.0025 U	0.0025 U	3.2 J
N22	04897	18.7	0.41	3.14	2.61	0.0022 J	0.0025 U	4 U

Cell 7-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-235 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
N22	04898	16.8	0.14 J	2.80	1.79	0.0025 U	0.0025 U	4.1 U
N22	04899	18.2	0.34 J	2.49	1.85	0.0022 J	0.0025 U	2.5 J
N22	04900	16.2	0.63	1.87	1.92	0.0024 J	0.0025 U	4.1 U
N22	04901	18.1	0.13 U	2.58	2.48	0.0025 U	0.0025 U	4 U
N22	04902	15.5	0.27 J	3.76	2.86	0.057	0.00038 J	1.8 J
N23	04860	18.4	0.13 J	4.21	3.77	0.00063 J	0.0025 U	4 U
N23	04861	15.2	0.13 U	2.37	1.95	0.0011 J	0.00070 J	4.1 U
N23	04862	12.7	1.04	10.2	10.3	0.0030 U	0.0034	13.0
N23	04864	18.0	0.14 U	2.31	2.09	0.0025 U	0.00059 J	4.1 U
N23	04867	15.6	0.118 J	1.87	1.64	0.0028	0.00052 J	4.1 U
N23	04868	12.6	0.58	7.24	6.80	0.0025 U	0.0013 J	2.2 J
O22	04876	18.6	0.16 J	1.42	1.35 J	0.0025 U	0.0010 J	4 U
O22	04878	16.7	0.26 J	2.90	2.54	0.0025 U	0.0012 J	4.1 U
O22	04879	21.4	0.43	3.35	2.31	0.0025 U	0.00085 J	4.1 U
O22	04881	19.5	0.53	3.41	3.29	0.0025 U	0.00051 J	1.9 J
O22	05287	22.0	1.38	1.50	1.20	0.0025 U	0.0025 U	4.1 U
O22	05288	20.5	1.21	1.48	1.60	0.0025 U	0.0025 U	4.1 U
O23	04885	18.6	0.20 J	1.79	1.88	0.0077	0.083	4.1 U
O23	04886	15.6	0.20 J	3.78	3.46	0.00065 J	0.0026 U	4.1 U
O23	04887	12.7	0.18 J	2.93	2.74	0.0025 U	0.0025 U	1.9 J
P22	04841	21.3	0.99	1.79	1.61	0.0024 J	0.0025 U	1.7 J
P22	04843	20.0	0.34 J	7.61	7.47	0.0026 U	0.0026 U	4.1 U
P22	04844	22.0	0.46	1.94	1.67	0.0026 U	0.00030 J	1.7 J
P22	04846	20.2	0.18 J	2.29	2.08	0.0025 U	0.0025 U	4.1 U
P22	05283	19.8	0.57	1.98	1.90	0.0025 U	0.0025 U	1.3 J
P22	05284	17.2	0.17 U	4.86 J	3.80 J	0.0025 U	0.0025 U	0.34 J
P22	05285	20.4	0.131 J	1.56	1.58	0.0025 U	0.0025 U	0.18 J
P22	05286	17.7	0.12 U	1.28	1.14	0.0025 U	0.0025 U	1.1 J
P23	04888	20.5	0.14 J	3.71	3.72	0.0025 U	0.0025 U	4 U
P23	04889	16.9	0.31 J	5.20	5.36	0.00031 J	0.0026 U	2.0 J
P23	04890	14.4	0.37 J	5.16	5.70	0.0025 U	0.0025 U	4 U
P23	04891	11.5	0.72	7.05	7.84	0.0026 U	0.0026 U	2.0 J
P23	04892	19.4	0.17 J	1.82	2.04	0.0026 U	0.0026 U	4.1 U
P23	04893	16.7	0.110 J	11.0	11.6	0.0025 U	0.0025 U	2.0 J
P23	04894	13.3	0.19 J	11.2	11.4	0.0025 U	0.0025 U	2.2 J
P23	04895	10.7	0.61	47.8	51.5	0.0026 U	0.0026 U	5.9
P23	04896	8.4	0.37 J	0.67	0.65	0.00084 J	0.0026 U	4.2
Q22	05293	22.3	0.35 J	1.08	1.05	0.0025 U	0.0025 U	4.1 U
Q22	05294	19.8	0.37 J	2.20	1.31	0.0026 U	0.0026 U	4.1 U
Q22	05295	23.1	0.29 J	1.81	1.44	0.0025 U	0.0025 U	4.1 U
Q22	05296	19.9	0.28 J	1.92	1.56	0.0026 U	0.0026 U	4.1 U
Q22	05297	18.2	0.24 J	2.96	2.28	0.0026 U	0.0026 U	1.8 J
Q22	05298	15.7	0.21 J	4.14	3.80	0.0025 U	0.0025 U	4.1 U
Q22	05299	13.0	0.32 J	4.45	3.56	0.0025 U	0.0025 U	4.1 U
Q23	05304	20.5	0.52	3.63	3.05	0.0026 U	0.0012 J	2.3 J
Q23	05305	16.9	0.43	5.53	5.45	0.0026 U	0.0026 U	2.2 J

**Cell 7-Table 5
 Summary of Verification Wall Sample Results
 Severn Trent Laboratories, Inc.**

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q23	05306	13.4	0.26 J	3.17	3.15	0.0025 U	0.0025 U	4.1
Q23	05307	10.9	0.36 J	9.1	8.1	0.0025 U	0.0025 U	2.7 J
Q23	05308	7.8	0.92	20.9	20.8	0.0029 U	0.00034 J	13.2
Q23	05309	5.4	1.17	0.69	0.66	0.0027 U	0.0027 U	5.0
Q23	05310	9.5	0.45	11.3	10.9	0.0026 U	0.0026 U	4.1 U
Q23	05311	6.7	0.55	2.92	2.81	0.0026 U	0.00041 J	4.1 J

Cell 7-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 7-Figures 6a and 6b for sample ids and associated locations.

Cell 7-Table 6
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O22	DL01	16812	20.0	0.38		5.44			
O22	DL01	16813	21.0	< 0.10		< 5.78			
O22	DL01	16814	22.0	0.38		5.57 J			
O22	DL01	16815	23.0	0.35		< 3.29			
O22	DL01	16816	24.0	0.28		< 3.36			
O22	DL01	16817	25.0	0.35		6.99			
O22	DL01	16818	26.0	0.21		3.85			
O22	DL01	16819	27.0	0.25		5.96 J			
O22	DL01	16820	28.0	0.39		12.09			
O22	DL01	16821	29.0	0.27		7.64			
O22	DL01	16822	30.0	0.27		4.08			
O22	DL01	16823	31.0	0.22		< 3.32			
O22	DL01	16824	32.0	0.40		< 2.86			
O22	DL01	16825	33.0	< 0.05		< 3.63			
O22	DL01	16826	34.0	0.39		< 3.81			
O22	DL01	16827	35.0	0.29		< 3.63			
O22	DL01	16828	36.0	0.24		< 2.73			
O22	DL01	16829	37.0	< 0.09		< 3.58			
O22	DL01	16830	38.0	0.51		< 4.42			
O22	DL01	16832	39.0	0.49		5.13			
O22	DL01	16831	40.0	0.46		< 4.73			
O22	DL01	16833	41.0	0.40		4.83			
O22	DL01	16834	42.0	0.33		< 3.63			
O22	DL01	16835	43.0	< 0.13		< 3.57			
O22	DL01	16836	44.0	0.75		5.68			
O22	DL01	16837	45.0	0.48		< 4.22			
O22	DL01	16838	46.0	0.90		< 4.31			
O22	DL01	16839	47.0	< 0.15		< 4.42			
O22	DL01	16840	48.0	1.63		9.31			
O22	DL01	16841	49.0	1.07		6.61			
O22	DL01	16842	50.0	1.42		10.87	0.0027 U	0.0027 UJ	6.8
O22	DL02	16777	21.0	0.62		< 4.52			
O22	DL02	16778	22.0	0.61		< 4.10			
O22	DL02	16779	23.0	0.83		5.36			
O22	DL02	16780	24.0	0.60		9.08			
O22	DL02	16781	25.0	0.46		7.81			
O22	DL02	16782	26.0	0.59		< 4.67			
O22	DL02	16783	27.0	0.68		< 5.50			
O22	DL02	16785	28.0	0.55		10.41			
O22	DL02	16786	29.0	0.49		< 3.82			
O22	DL02	16787	30.0	0.58		< 3.70			
O22	DL02	16788	31.0	0.43		< 3.97			
O22	DL02	16789	32.0	0.84		12.00			
O22	DL02	16790	33.0	0.62		< 4.71			
O22	DL02	16791	34.0	0.60		6.74 J			
O22	DL02	16792	35.0	0.70		5.42			
O22	DL02	16793	36.0	0.75		< 5.49			

**Cell 7-Table 6
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O22	DL02	16794	37.0	0.60		< 4.34			
O22	DL02	16799	38.0	0.83		9.41			
O22	DL02	16800	39.0	0.94		16.18			
O22	DL02	16801	40.0	1.44		< 5.77			
O22	DL02	16802	41.0	0.73		< 3.73			
O22	DL02	16803	42.0	1.15		< 5.12			
O22	DL02	16804	43.0	0.87		8.08			
O22	DL02	16805	44.0	1.19		< 5.40			
O22	DL02	16806	45.0	0.81		< 4.36			
O22	DL02	16807	46.0	1.46		< 6.12			
O22	DL02	16808	47.0	1.36		< 6.77			
O22	DL02	16809	48.0	0.97		< 5.62			
O22	DL02	16810	49.0	1.44		7.87			
O22	DL02	16811	50.0	1.53	4.35	4.13	0.0032 U	0.00052 J	9.1
O22	DL04	16846	20.0	0.28		4.77			
O22	DL04	16847	21.0	0.25		< 3.43			
O22	DL04	16848	22.0	0.18		< 3.27			
O22	DL04	16849	23.0	0.21		< 3.70			
O22	DL04	16850	24.0	0.24		< 4.25			
O22	DL04	16851	25.0	0.27		< 3.76			
O22	DL04	16852	26.0	0.24		< 3.67			
O22	DL04	16853	27.0	0.30		10.72			
O22	DL04	16854	28.0	0.31		< 4.89			
O22	DL04	16855	29.0	0.20		< 3.08			
O22	DL04	16856	30.0	0.36		8.02 J			
O22	DL04	16857	31.0	0.25		< 3.70			
O22	DL04	16858	32.0	0.29		3.09			
O22	DL04	16859	33.0	0.21		< 2.90			
O22	DL04	16860	34.0	< 0.08		< 3.83			
O22	DL04	16871	35.0	0.23		< 3.26			
O22	DL04	16872	36.0	< 0.05		7.91			
O22	DL04	16908	37.0	0.33		< 3.50			
O22	DL04	16909	38.0	0.44		4.62 J			
O22	DL04	16910	39.0	0.24		8.40			
O22	DL04	16911	40.0	0.27		< 3.25			
O22	DL04	16912	41.0	0.46		3.91			
O22	DL04	16913	42.0	0.31		< 3.47			
O22	DL04	16914	43.0	< 0.08		< 3.28			
O22	DL04	16915	44.0	0.54		11.30			
O22	DL04	16916	45.0	0.77		< 3.81			
O22	DL04	16917	46.0	0.97		< 5.30			
O22	DL04	16918	47.0	1.24		9.14			
O22	DL04	16919	48.0	1.86		< 7.87			
O22	DL04	16920	49.0	1.11		< 6.28			
O22	DL04	16921	50.0	1.70		6.04	0.0027 U	0.0027 UJ	6.6
P22	DL03	16724	23.0	0.71		8.74			
P22	DL03	16725	24.0	0.53		11.86			

**Cell 7-Table 6
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P22	DL03	16726	25.0	0.53		< 4.38			
P22	DL03	16727	26.0	1.12		< 5.38			
P22	DL03	16728	27.0	1.14		< 4.85			
P22	DL03	16734	28.0	1.31		< 4.91			
P22	DL03	16735	29.0	1.29		< 5.26			
P22	DL03	16736	30.0	1.25		< 5.33			
P22	DL03	16737	31.0	1.73		5.79 J			
P22	DL03	16740	32.0	1.97		< 4.10			
P22	DL03	16741	33.0	1.99		< 3.66			
P22	DL03	16745	34.0	1.55		< 5.33			
P22	DL03	16746	35.0	1.16		< 5.35			
P22	DL03	16749	36.0	1.42		< 5.44			
P22	DL03	16750	37.0	1.52		< 6.08			
P22	DL03	16753	38.0	1.45		< 4.82			
P22	DL03	16754	39.0	1.17		< 5.67			
P22	DL03	16756	40.0	1.16		< 5.74			
P22	DL03	16757	41.0	1.84		6.49			
P22	DL03	16760	42.0	1.13		< 6.56			
P22	DL03	16761	43.0	1.26		< 5.28			
P22	DL03	16764	44.0	1.28		< 5.00			
P22	DL03	16765	45.0	1.15		< 4.38			
P22	DL03	16766	46.0	1.28		< 5.41			
P22	DL03	16767	47.0	1.13		< 6.31			
P22	DL03	16770	48.0	0.78		< 5.75			
P22	DL03	16771	49.0	1.40		6.97 J			
P22	DL03	16776	50.0	1.04	2.71	2.41	0.0031 U	0.0014 J	6.5

**Cell 7-Table 6
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238
TCE - Trichloroethene

PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 7-Figure 7 for boring locations.

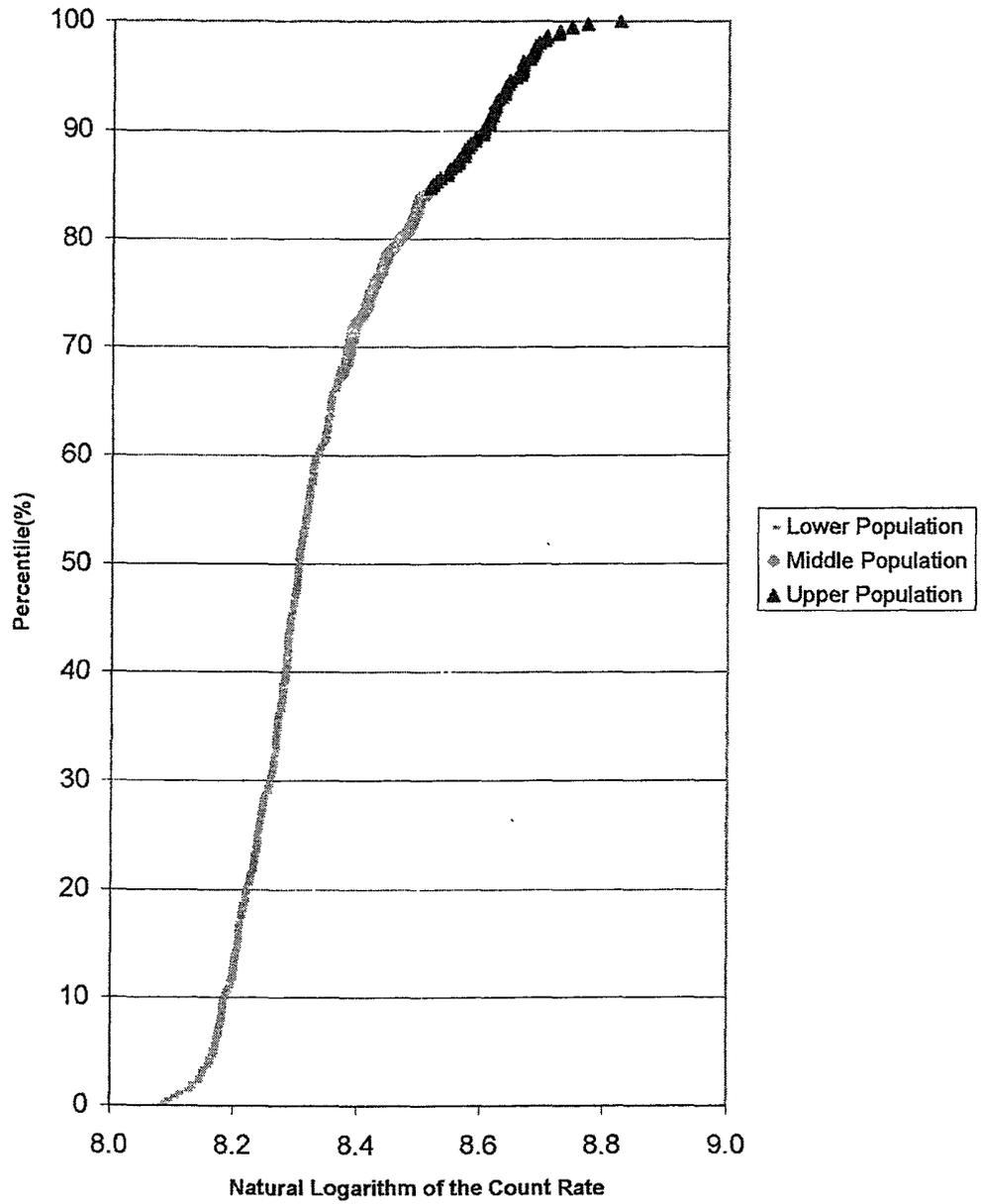
DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

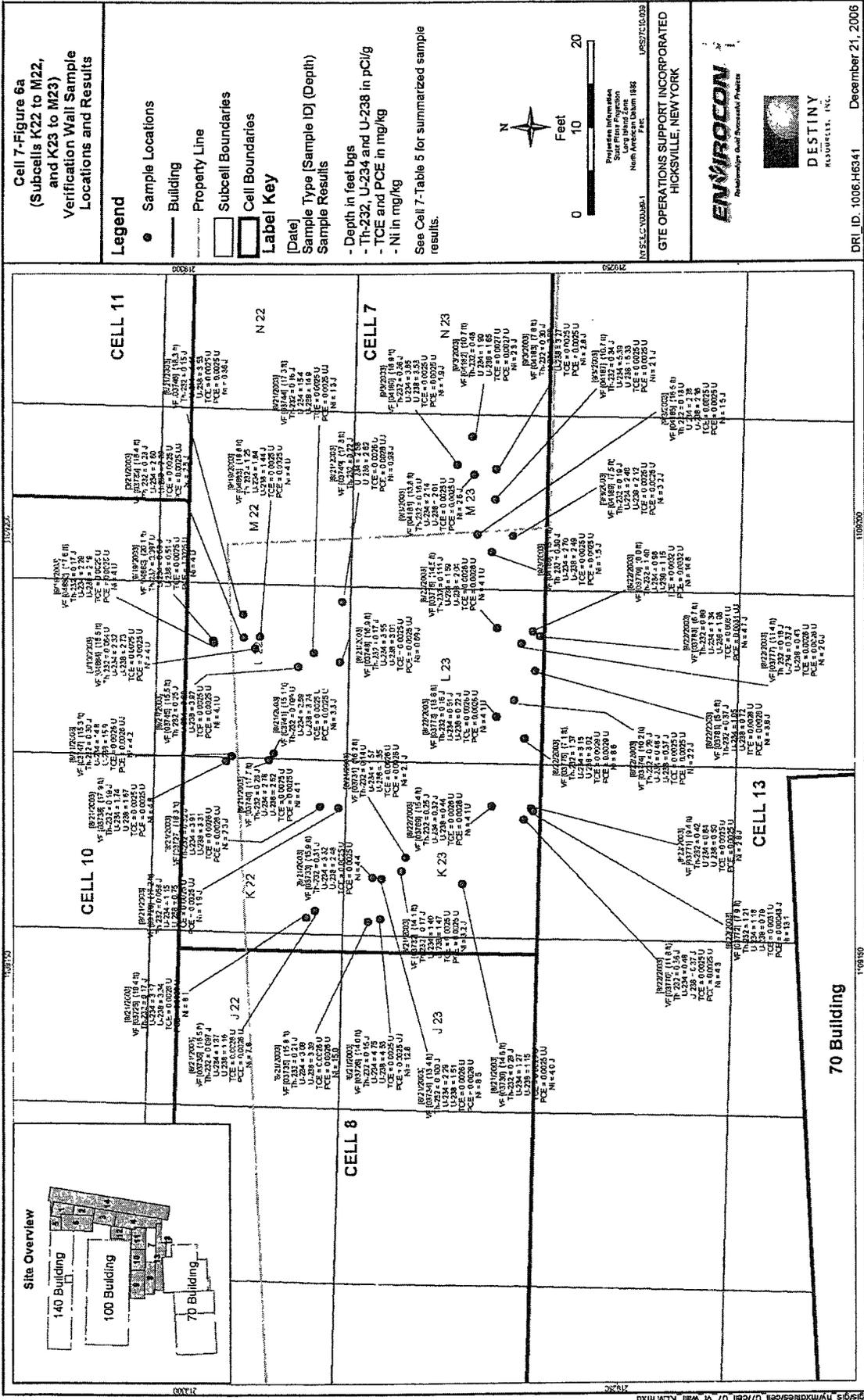
Off-Site sample results are in bold font and indicate that the analysis was performed by Severn Trent Laboratories, Inc.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.

Cell 7-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data





Cell 7-Figure 7 Focused Soil Boring Locations

Legend

- Boring Locations
- Building
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

See Cell 7-Table 6 for summarized sample results

Projection Information
Using Universal Transverse Mercator
North American Datum 1983
EPSG: 4961
LRS27045.339

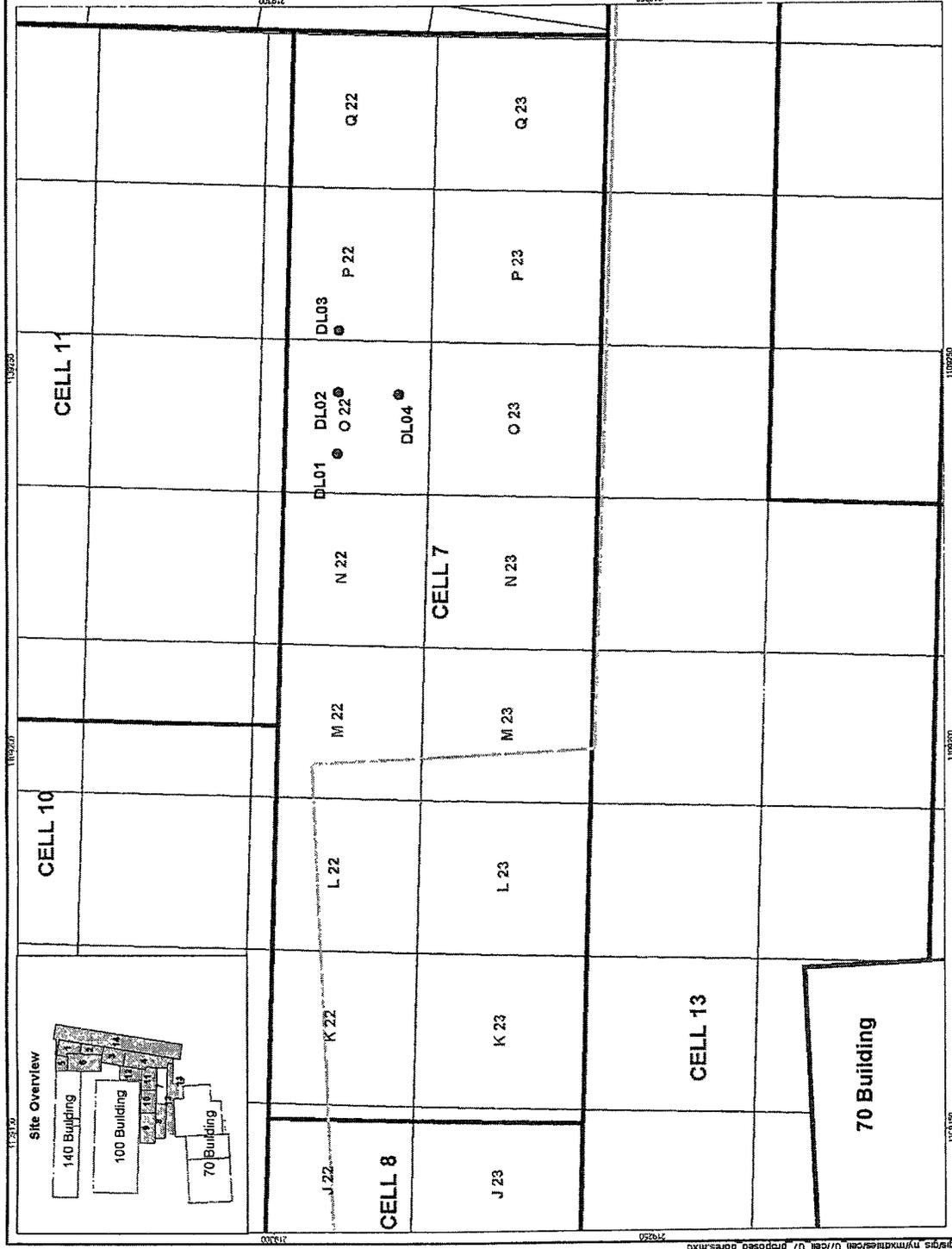
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

ENVIROCON
Advancing Soil Remediation Practice

DESTINY
RESOURCES, INC.

0 10 20
Feet

DR1 ID: 1006.H8052 December 21, 2006





"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

10/06/2003 03:53 PM

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: ProRadCon@aol.com, "Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>, "Robert Stewart"
<rstewar@gw.dec.state.ny.us>, "Thomas Papura"
<tpapura@gw.dec.state.ny.us>
Subject: Former Sylvania site cells 4 & 7

We have reviewed the confirmation sample data from the walls and floor of cells 4 & 7. We agree that these results are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling this cell. Once we have received your data package for this cell, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003362

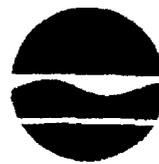
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

October 27, 2003

Jean Agostinelli
GTE Operations Support Inc.
140 Cantiague Rock Road
Hickville, NY 11801

Re: 1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack
2) Borrow Soils - Mercy Hospital Stockpile
3) Borrow soils - Round Swamp and Winding Stockpile

Dear Ms. Agostinelli:

The Department has reviewed the above borrow soils reports and has the following recommendations:

1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack

- ▶ **Commack:** I recommend that you do not use the soils from Commack due the detection of 140 ppm of chromium in one of the characterization samples.
- ▶ **111 Pit:** I noticed that one of the characterization samples detected 120 ppb of benzo(a) pyrene. This detection is above the TAGM-4046 recommended cleanup objective of 61 ppb for this compound. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentration of the contaminant. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TICs were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

- ▶ **JDP Stock Pile 2:** Regarding chemical considerations, I have no objections to you using these soils as backfill. I am awaiting Jerry Riggi's radiological evaluation of these borrow soils. His evaluation will be forwarded to you, when available.

Attachment B
Page 1 of 2

GTES0003363

2) Borrow Soils - Mercy Hospital Stockpile

Two of the characterization samples detected 290 ppb and 100 ppb of benzo(a) pyrene. One of these samples also detected 290 ppb of benzo(a) anthracene. The TAGM-4046 recommended cleanup objectives for benzo(a) pyrene and benzo(a) anthracene are 61 ppb and 224 ppb, respectively. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentrations of the contaminants. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TIC were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

I would also like to note that 100 ppb of PCBs was detected in one of the samples. This concentration is well below the TAGM -4046 cleanup objective. However, I would check the historical use of the property from where this stockpile originated to see if PCBs were historically used there. Additional characterization samples for PCBs are recommended if PCB usage is discovered.

3) Borrow Soils - Round Swamp and Winding Stockpile

Based on the results of the three characterization samples, the Department has no objections to you using these soils as backfill. However, please note that, based on figure 1, this stockpile is located near to the entrance to the inactive hazardous waste site known as Old Bethpage Landfill (Site # 130001). This landfill historically received municipal and industrial wastes. I recommend that you verify that the stockpiled soils could not have been impacted by the former operations at this landfill.

Please note that it is your responsibility to adequately characterize the borrow soils. My above recommendations are made under the assumption that your characterization samples accurately reflect the concentrations present in the large volume of soils evaluated.

If you have any questions, please do not hesitate to call me at (631) 444-0244.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc by e-mail: W. Parish
J. Riggi

Attachment B
Page 2 of 2

Cell 7 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 7, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 7 consists of subcells subcells K22 to Q22 and K23 to Q23. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 7 was performed using the floor VF floor sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 51 VF floor samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 51 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 4 (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 86 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

The third report is on pages 8 through 11 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 11) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.25. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup limits.

Table C.1

Cell 7

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
03471	0.15	3.78	2.87
03472	0.15	1.60	2.10
03473	0.27	3.25	2.48
03474	0.09	3.33	2.86
03475	0.11	1.63	1.56
03476	0.17	0.74	0.85
03477	0.16	0.43	0.52
03478	0.22	3.03	2.76
03750	0.14	1.59	0.95
03743	0.19	5.98	6.44
03751	0.17	2.74	2.49
03752	0.38	5.54	5.50
03737	0.17	2.33	2.69
03742	0.22	0.59	0.43
03753	0.11	0.29	0.24
03754	0.16	0.50	0.59
04172	0.34	11.40	11.20
04171	0.14	5.79	6.50
04174	0.15	6.02	5.82
04176	0.27	7.28	7.61
04177	0.13	2.74	2.74
04178	0.35	3.29	3.07
04179	0.12	2.04	2.21
04871	1.17	3.42	2.35
04874	0.44	1.96	2.16
04875	0.29	1.53	1.44
04877	0.43	3.64	3.25
04834	0.27	3.51	3.69
04838	0.17	1.18	1.22
04839	0.32	3.83	3.03
04869	0.09	2.29	0.17
04870	0.49	2.17	1.76
04872	0.26	1.42	1.25
04873	0.45	2.26	1.80
04857	0.15	2.03	1.73
04859	0.20	4.27	3.95
05280	1.13	0.81	0.66
05281	1.10	0.80	0.47
04851	0.24	2.68	2.11
05282	1.08	1.09	0.77
04863	0.16	1.67	1.28
04865	0.33	12.20	12.60
04866	0.25	8.01	8.85
05289	1.07	2.09	1.57

Table C.1

Cell 7

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05290	0.82	0.65	0.62
05291	0.14	1.29	1.31
05292	1.06	1.41	1.16
05300	0.20	1.99	1.67
05301	1.18	10.90	9.50
05302	0.51	0.71	0.74
05303	0.22	5.78	5.28

Notes:

Cell area = 598 sq. meters



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

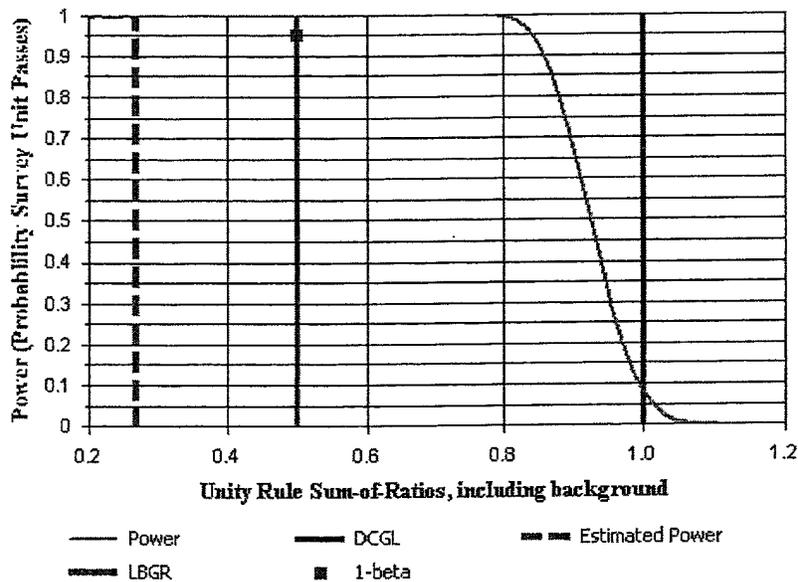


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 7 Status Report w STL		
Comments:			
Area (m ²):	598	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.15
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.27
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3 x 3 NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.4 \pm 0.35	N/A
U-234	3.2 \pm 2.8	N/A
U-238	3 \pm 3	N/A

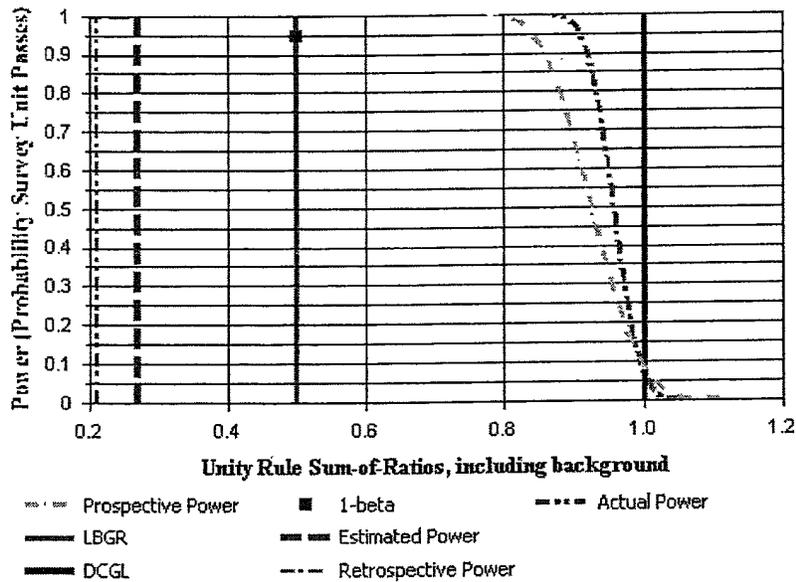


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 7 Status Report w STL
Report Number: 1
Survey Unit Samples: 51
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
03471	S	0.15	3.78	2.87
03472	S	0.15	1.6	2.1
03473	S	0.27	3.25	2.48
03474	S	0.09	3.33	2.86
03475	S	0.11	1.63	1.56
03476	S	0.17	0.74	0.85
03477	S	0.16	0.43	0.52
03478	S	0.22	3.03	2.76
03750	S	0.14	1.59	0.95
03743	S	0.19	5.98	6.44
03751	S	0.17	2.74	2.49
03752	S	0.38	5.54	5.5
03737	S	0.17	2.33	2.69
03742	S	0.22	0.59	0.43
03753	S	0.11	0.29	0.24
03754	S	0.16	0.5	0.59
04172	S	0.34	11.4	11.2
04171	S	0.14	5.79	6.5
04174	S	0.15	6.02	5.82
04176	S	0.27	7.28	7.61
04177	S	0.13	2.74	2.74
04178	S	0.35	3.29	3.07
04179	S	0.12	2.04	2.21
04871	S	1.17	3.42	2.35
04874	S	0.44	1.96	2.16
04875	S	0.29	1.53	1.44
04877	S	0.43	3.64	3.25
04834	S	0.27	3.51	3.69
04838	S	0.17	1.18	1.22
04839	S	0.32	3.83	3.03
04869	S	0.09	2.29	0.17
04870	S	0.49	2.17	1.76
04872	S	0.26	1.42	1.25
04873	S	0.45	2.26	1.8
04857	S	0.15	2.03	1.73
04859	S	0.2	4.27	3.95
05280	S	1.13	0.81	0.66
05281	S	1.1	0.8	0.47
04851	S	0.24	2.68	2.11
05282	S	1.08	1.09	0.77
04863	S	0.16	1.67	1.28
04865	S	0.33	12.2	12.6
04866	S	0.25	8.01	8.85
05289	S	1.07	2.09	1.57
05290	S	0.82	0.65	0.62
05291	S	0.14	1.29	1.31
05292	S	1.06	1.41	1.16
05300	S	0.2	1.99	1.67
05301	S	1.18	10.9	9.5
05302	S	0.51	0.71	0.74
05303	S	0.22	5.78	5.28



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
03471	S	0.19
03472	S	0.13
03473	S	0.21
03474	S	0.16
03475	S	0.1
03476	S	0.09
03477	S	0.08
03478	S	0.19
03750	S	0.1
03743	S	0.32
03751	S	0.17
03752	S	0.36
03737	S	0.16
03742	S	0.1
03753	S	0.05
03754	S	0.08
04172	S	0.57
04171	S	0.3
04174	S	0.29
04176	S	0.39
04177	S	0.16
04178	S	0.25
04179	S	0.13
04871	S	0.53
04874	S	0.24
04875	S	0.16
04877	S	0.29
04834	S	0.24
04838	S	0.11
04839	S	0.25
04869	S	0.08
04870	S	0.25
04872	S	0.15
04873	S	0.24
04857	S	0.13
04859	S	0.24
05280	S	0.43
05281	S	0.42
04851	S	0.18
05282	S	0.42
04863	S	0.12
04865	S	0.61
04866	S	0.43
05289	S	0.46
05290	S	0.32
05291	S	0.1
05292	S	0.43
05300	S	0.14
05301	S	0.83
05302	S	0.21
05303	S	0.3



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	51	N/A	N=13
Mean (SOR)	0.25	N/A	0.27
Median (SOR)	0.21	N/A	N/A
Std Dev (SOR)	0.16	N/A	0.15
High Value (SOR)	0.83	N/A	N/A
Low Value (SOR)	0.05	N/A	N/A

Cell 8 Status Report

INTRODUCTION

Cell 8 is comprised of subcells D22 to J22 and D23 to J23 and is located on the south side of the 100 Property and the north side of the 70 Property (Cell 8-Figure 1 and Figure 6 in Volume I). Excavation of Cell 8 began on July 22, 2003 and was completed on September 11, 2003. Approval to backfill Cell 8 was received by e-mail from NYSDEC representatives on September 29, 2003 (Cell 8-Attachment A). A formal request to backfill Cell 8 was submitted in a report to NYSDEC titled *Cell 8 and Cell 13, Subcells E24 and F24 – Attainment of Radiological and Chemical Cleanup Levels* dated November 20, 2003. (Cell 13, subcells E24 and F24 had additional excavation performed in them as part of the Cell 8 excavation. The excavation of these two subcells is discussed in the *Cell 13 Status Report*.) The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 8 was backfilled beginning October 2, 2003 and was completed on October 10, 2003. The soils used for backfill came from the source identified as the 111 Pit North in Hauppauge, New York. Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at each backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling – 111 Pit, JDP Stock Pile 2, and Commack*, dated October 17, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated October 27, 2003 (Cell 8-Attachment B).

DEPTHS OF EXCAVATION

Cell 8 was excavated to depths ranging from approximately 5 to 22 ft bgs. The excavation depths for each subcell are provided in Cell 8-Table 1 and are shown on Cell 8-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 7,896,922 pounds of soil and debris (373 Lift LinersTM) were removed from Cell 8 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 8, one anomaly, a plastic pipe, was encountered. Information about the anomaly is provided in Cell 8-Table 2. The approximate location where the anomaly was encountered during excavation activities is shown on Cell 8-Figure 2. The anomaly encountered during the excavation activities in Cell 8 was sized to fit and placed in a Lift LinerTM and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 8, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as can be seen on Cell 8-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 8-Figure 4 depicts a CFD plot of the 1128 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 8-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Cell 8-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 of Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I).

In addition to the floor samples described above, an additional 101 VF samples were collected from the walls or at the joint of a wall and floor (Cell 8-Figures 6a and 6b).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

SYSTEMATIC SAMPLING

Subsequent to the Phase I soil remediation, four systematic borings were advanced in Cell 8 as part of the systematic sampling program conducted in Cell 9. The analytical results indicated some constituents above the cleanup level below the design engineering limits. These results are reported in Table 2 of *Subsurface Soil Sampling and Analysis Report, Cell 9 Subsurface Soil Delineation*, Rev 1: October 2005, submitted separately to NYSDEC.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 8-Table 3 and are shown on Cell 8-Figure 5. Cell 8-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF samples. The radiological, PCE, TCE, and nickel results for STL analyses of the wall VF samples are provided in Cell 8-Table 5 and are shown on Cell 8-Figures 6a and 6b.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 8, passed this evaluation (Cell 8-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on verification sample STL analytical results, the radiological and chemical Site cleanup levels were attained for Cell 8.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 8-Table 1:	Cell 8 Subcell Excavation Depths
Cell 8-Table 2:	Cell 8 Anomalies List and Sample Results
Cell 8-Table 3:	Cell 8 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 8-Table 4:	Cell 8 Maximum Verification Floor and Wall Sample Results Severn Trent Laboratory, Inc.
Cell 8-Table 5:	Cell 8 Summary of Verification Wall Sample Results Severn Trent Laboratories, Inc.

Figures

Cell 8-Figure 1:	Cell 8 Excavation Depth Contours
Cell 8-Figure 2:	Cell 8 Anomalies
Cell 8-Figure 3:	Cell 8 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 8-Figure 4:	Cumulative Frequency Distribution for Cell 8 Gamma Radiation Walkover Survey Data
Cell 8-Figure 5:	Cell 8 Floor Verification Sample Locations and Results
Cell 8-Figure 6a:	Cell 8 (Subcells D22 to G22 and D23 to G23) Verification Wall Sample Locations and Results
Cell 8-Figure 6b:	Cell 8 (Subcells H22 to J22 and H23 to J23) Verification Wall Sample Locations and Results

Attachments

Cell 8-Attachment A:	E-Mail from NYSDEC to GTEOSI dated September 29, 2003
Cell 8-Attachment B:	Letter from NYSDEC to GTEOSI dated October 27, 2003
Cell 8-Attachment C:	Cell 8 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results

**Cell 8-Table 1
Subcell Excavation Depths**

CELL 9					CELL 10		CELL 7
D22	E22	F22	G22	H22	I22	J22	
10-18 ft.	12-19 ft.	11-15 ft.	10-19 ft.	12-22 ft.	12-20 ft.	16-22 ft.	
D23	E23	F23	G23	H23	I23	J23	
6-10 ft.	6-12 ft.	5-9 ft.	5-13 ft.	5-16 ft.	6-17 ft.	9-20 ft.	
					CELL 13		

Notes:
Excavation depths are approximate.
 — Subcell Boundary
 — Cell Boundary

**Cell 8-Table 2
Anomaly Sample Results**

Pipe	NS	NS	B-1728	02	4" (6ft)	Plastic	NS	0.5	NS												

Analyte:
 Th-232 - Thorium-232
 U-234 - Uranium-234
 U-235 - Uranium-235
 U-238 - Uranium-238

Unit:
 pCi/g - picocurie/gram
 mg/kg - milligram/kilogram

Note:
 See Cell 8-Figure 2 for sample locations.
 NS - Not sampled.
 (STL) - Results are from Savem Trend Laboratories, Inc.

Analyte:
 TCE - Trichloroethene
 PCE - Tetrachloroethene
 Ni - Nickel

Unit:
 com - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

**Cell 8-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Subcell	Sample Location	Sample ID	Depth (feet)	TH-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
D22	A	04540	10.3	0.53	2.80	2.58			
D22	B	04541	12.9	0.37 J	0.63	0.63 J	0.0026 U	0.0026 U	4.8
D22	C	04542	10.2	0.68	1.10	1.07			
D22	D	04543	10.8	0.30 J	1.06	0.88			
D23	A	04573	9.8	0.45	0.67 J	0.74 J			
D23	B	04574	6.7	0.43	0.60 J	0.47 J			
D23	C	04575	5.7	0.37 J	0.99 J	1.07 J	0.0038	0.0025 U	2.5 J
D23	D	04576	5.7	0.30 J	0.93 J	0.97 J			
E22	A	04536	18.1	0.21 U	0.70 J	1.05	0.00079 J	0.00067 J	2.4 J
E22	B	04537	17.2	0.25 J	3.70	3.65			
E22	C	04538	17.6	0.25 J	0.50 J	0.26 J			
E22	D	04539	19.1	0.18 J	1.69	1.02			
E23	A	04560	10.1	0.71	0.80 J	0.67 J	0.0033	0.00027 J	10.4
E23	B	04561	6.1	0.26 J	0.40 J	0.35 J			
E23	C	04562	6.3	0.21 J	0.36 J	0.48 J			
E23	D	04564	6.5	0.40 J	0.48 J	0.65 J			
F22	A	02831	11.1	0.60	8.7	9.9 J	0.0026 U	0.0026 UJ	14.6
F22	B	02832	13.0	0.31 J	6.17	6.61 J			
F22	C	02833	14.7	0.27 J	7.88	8.36 J			
F22	D	02834	12.7	0.60	4.18	3.97 J			
F23	A	02598	5.0	0.48	0.68 J	0.99 J			
F23	B	02600	6.1	0.44	0.54 J	0.67 J			
F23	C	02599	5.9	0.34 J	1.49	1.33	0.0029 U	0.0029 U	8.3
F23	D	02601	5.2	0.42	0.29 J	0.39 J			
G22	A	02836	15.2	0.61	8.22	7.86 J	0.0027 U	0.0027 UJ	5.8
G22	B	02854	18.0	0.53	9.6	9.0 J			
G22	C	02853	13.3	0.58	8.7	8.6 J			
G22	D	02855	12.8	0.33 J	7.59	7.37 J			
G23	A	02610	6.1	0.38 J	0.98 J	1.23			
G23	B	02609	5.8	0.71	1.40	0.70 J	0.0025 U	0.0025 U	5.9
G23	C	02611	5.7	0.74	0.83 J	0.74 J			
G23	D	02612	6.0	1.19	1.44	1.43			
H22	A	02765	20.3	1.44	5.93	5.21	0.0026 U	0.0026 U	15.6
H22	B	02766	21.8	0.43	9.3 J	8.1 J			
H22	C	02767	17.1	0.35 J	6.7 J	5.45 J			
H22	D	02768	19.4	0.42	4.80	4.00			
H23	A	02772	11.2	0.44	1.08 J	0.64 J			
H23	B	02773	11.3	0.21 J	1.55	1.47			
H23	C	02774	7.6	1.14	0.95 J	0.98 J	0.0029 U	0.0018 J	9.4
H23	D	02775	6.9	0.20 J	0.76 J	0.30 J			
I22	A	02806	19.5	0.46	2.61	1.91			
I22	B	02807	20.8	0.21 J	2.04 J	1.13 J	0.0026 U	0.0026 U	3.1 J
I22	C	02808	19.2	1.10	9.5	8.6			
I22	D	02809	20.6	0.51	4.58	3.59			

Cell 8-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	U-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
I23	A	02810	8.5	0.74	5.09	4.28			
I23	B	02811	7.3	0.55	4.28	4.16	0.0026 U	0.0026 UJ	12.0
I23	C	02812	7.1	1.11	3.66	3.34			
I23	D	02813	8.1	0.69	1.88	2.14			
J22	A	04198	21.7	0.36 J	4.12	3.35			
J22	B	04199	22.2	0.78	8.47	8.19			
J22	C	04197	22.2	0.79	3.70	3.37	0.0026 U	0.0026 U	10.8 J
J22	D	04200	20.9	0.54	3.48	3.56			
J23	A	04206	18.6	0.14 J	3.34	3.29	0.0026 U	0.0026 U	13.2 J
J23	B	04207	14.5	0.66	3.12	2.73			
J23	C	04209	9.9	1.08	13.1	12.5			
J23	D	04210	14.0	0.25 J	1.53	1.40			

Cell 8-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 8-Figure 5 for sample ids and associated locations.

Blank cell indicates analysis was not performed.

Cell 8-Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Type	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	Floor	1.44	20.3	H22
	Wall	1.82	15.2	I22
Maximum U-234 (pCi/g)	Floor	13.1	9.9	J23
	Wall	13.8	20.0	I22
Maximum U-238 (pCi/g)	Floor	12.5	9.9	J23
	Wall	12.8 J	20.0	I22
Maximum TCE (mg/kg)	Floor	0.0038	5.7	D23
	Wall	0.077	16.1	E22
Maximum PCE (mg/kg)	Floor	0.0018 J	7.6	H23
	Wall	0.0017 J	8.6	I23
Maximum Ni (mg/kg)	Floor	15.6	20.3	H22
	Wall	80.5	15.7	E22

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

J - Validation qualifier used to indicate that the result is considered an estimate.

Cell 8-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	M-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
D22	04544	18.9	0.15 J	0.61	0.55 J	0.0025 U	0.0025 U	2.4 J
D22	04546	12.8	0.35 J	0.34 J	0.37 J	0.0025 U	0.00066 J	7.3
D22	04547	18.7	0.23 J	0.69 J	0.44 J	0.0030	0.0025 U	1.6 J
D22	04548	15.4	0.22 J	0.41 J	0.43 J	0.013	0.0025 U	4.6
D22	04549	12.6	0.24 J	0.68 J	0.46 J	0.0014 J	0.0025 U	1.9 J
D23	04577	9.1	0.48	0.78 J	0.58 J	0.0033	0.00049 J	3.1 J
D23	04578	5.9	0.25 J	0.95 J	0.74 J	0.0025 U	0.0025 U	2.9 J
D23	04579	9.7	1.03	1.08 J	1.18 J	0.0035	0.0013 J	12.3
D23	04580	7.0	0.24 J	0.55 J	0.47 J	0.0025 U	0.0025 U	2.6 J
E22	04524	18.3	0.19 J	0.57 J	0.40 J	0.0025 U	0.0025 U	7.7
E22	04525	14.8	0.19 U	0.34 J	0.75 J	0.00083 J	0.0025 U	4 U
E22	04526	12.3	0.114 J	0.48 J	0.33 J	0.0025 U	0.0025 U	3.2 J
E22	04527	17.7	0.25 J	3.29	3.52	0.0026 U	0.0026 U	53.1
E22	04528	15.7	0.19 J	7.04	7.59	0.0059	0.0026 U	80.5
E22	04529	13.1	0.88	0.49 J	0.52 J	0.00091 J	0.0025 U	4.5
E22	04530	18.2	0.34 J	4.68	4.72	0.00058 J	0.0025 U	1.7 J
E22	04531	16.1	0.071 J	0.52 J	0.64 J	0.077	0.0025 U	7.0
E22	04532	12.4	0.24 J	0.82 J	1.10	0.0025 U	0.0025 U	2.8 J
E22	04533	19.1	0.32 J	0.64 J	0.51 J	0.0025 U	0.0025 U	4.2
E22	04534	15.7	0.14 U	0.32 J	0.25 J	0.0019 J	0.0025 U	3.3 J
E22	04545	15.6	0.16 J	0.32 J	0.56 J	0.012	0.0025 U	8.5
E23	04535	13.0	0.29 J	0.44 J	0.39 J	0.00024 J	0.0014 J	3.0 J
E23	04565	10.7	0.74	0.86 J	0.95 J	0.0052	0.00044 J	7.4
E23	04566	8.0	0.89	1.12 J	1.11 J	0.0014 J	0.0012 J	12.6
E23	04568	11.9	0.72	0.60 J	0.54 J	0.0020 J	0.00079 J	8.5
E23	04569	8.8	0.65	1.37	1.61 J	0.0093	0.00028 J	3.5 J
E23	04570	5.7	0.35 J	0.49 J	0.51 J	0.013	0.0025 U	4.3
F22	03656	7.2	0.30 J	0.32 J	0.44 J	0.0025 U	0.00024 J	1.7 J
F22	03657	10.6	0.20 J	0.32 J	0.30 J	0.0025 U	0.0025 U	3.3 J
F22	03658	13.0	0.23 J	0.34 J	0.35 J	0.0025 U	0.0025 U	9.6
F22	03659	8.4	0.28 J	2.45	2.46	0.0026 U	0.0026 U	9.6
F22	03660	11.4	0.53	0.91 J	0.71 J	0.0025 U	0.0025 U	3.7 J
F22	03661	13.6	0.45	4.97	4.24	0.0025 U	0.0025 U	6.1
F22	03689	13.3	0.59	6.40	4.99	0.0025 U	0.0025 U	52.3
F22	03690	10.5	0.54	4.46	4.07	0.0028 U	0.0028 U	11.3
F23	03691	7.3	0.61	3.31	2.92	0.0026 U	0.0026 U	14.5
G22	03683	18.1	0.14 J	1.04 J	1.24	0.0025 U	0.0025 UJ	3.6 J
G22	03684	15.6	0.11 U	4.39	3.97	0.0025 U	0.0025 UJ	2.9 J
G22	03685	12.8	0.14 J	2.41	2.21	0.0025 U	0.0025 UJ	9.8
G22	03686	9.3	0.70	4.01	3.86	0.0026 U	0.0026 U	13.4
G22	03697	20.1	0.45	3.89	3.66	0.0025 U	0.0025 U	41.8
G22	03698	17.0	0.47	9.04	8.33	0.0025 U	0.0025 U	7.3
G22	03699	14.1	0.58	11.3	10.3	0.0026 U	0.0026 UJ	10.3
G23	03634	3.2	1.78	6.66	6.04	0.0025 U	0.0025 U	20.1
G23	03636	5.7	0.62	1.74	1.71	0.0026 U	0.0026 U	16.0
G23	03637	3.6	1.35	0.75 J	0.78 J	0.0026 U	0.0026 U	4.7

Cell 8-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G23	03639	5.6	0.48	1.05	0.90	0.0025 U	0.0025 U	6.5
G23	03662	8.2	1.21	7.41	6.81	0.0029 U	0.0029 U	23.3
G23	03663	9.2	0.67	6.27	6.22 J	0.0025 U	0.0025 U	37.2
G23	03664	9.0	0.65 J	5.12	4.78 J	0.0025 U	0.0025 U	7.4
G23	03688	6.8	0.38 J	3.01	2.30	0.0025 U	0.0025 U	3.3 J
H22	03665	12.7	0.73 J	6.00	5.40 J	0.0026 U	0.0026 U	8.2
H22	03666	15.7	0.18 J	4.11	3.57 J	0.0025 U	0.0025 U	37.3
H22	03667	18.5	0.14 J	4.69	4.02 J	0.0025 U	0.0025 U	14.7
H22	03668	21.5	0.23 J	6.54	5.94 J	0.0025 U	0.0025 U	50.5
H22	03670	16.2	0.13 U	2.76	2.75 J	0.0025 U	0.0025 U	11.8
H22	03671	18.4	0.27 J	9.8	8.7 J	0.0025 U	0.0025 U	36.2
H22	03672	21.8	0.26 J	5.40	5.11 J	0.0026 U	0.0026 U	21.8
H23	03669	13.2	0.29 J	1.69	1.79 J	0.0025 U	0.0025 U	7.3
H23	03673	5.8	0.55 J	3.29	3.44 J	0.0026 U	0.0026 U	12.5
H23	03674	10.9	0.16 J	0.45 J	0.39 J	0.0026 U	0.0026 U	2.7 J
H23	03675	8.1	0.97	0.80 J	0.61 J	0.0026 U	0.0026 U	2.9 J
H23	03676	7.1	0.70 J	0.74 J	0.60 J	0.0030 U	0.0030 UJ	12.8
H23	03677	10.1	1.01	0.66 J	0.60 J	0.0025 U	0.0025 UJ	2.0 J
H23	03678	8.3	1.0	0.78 J	0.80 J	0.0028 U	0.0028 UJ	9.9
H23	03679	6.9	0.55 J	0.78 J	0.59 J	0.0025 U	0.0025 UJ	2.2 J
H23	03680	10.8	0.64 J	0.88 J	0.74 J	0.0026 U	0.0026 UJ	2.5 J
H23	03681	9.9	0.70 J	3.08	2.80 J	0.0027 U	0.0027 UJ	9.4
H23	03682	6.5	0.56 J	1.13	1.43 J	0.0026 U	0.0026 UJ	5.2
I22	03642	12.6	0.16 J	2.81	2.57 J	0.0025 U	0.0025 UJ	40.1
I22	03643	15.2	1.82	10.4	9.0 J	0.0026 U	0.0026 UJ	19.8
I22	03644	18.2	1.36	5.31	4.10 J	0.0025 U	0.0025 UJ	15.2
I22	03645	20.3	0.68	3.78	2.74 J	0.0025 U	0.0025 UJ	10.8
I22	03647	14.1	0.31 J	6.71	5.96 J	0.0025 U	0.0025 UJ	20.3
I22	03648	17.3	0.95	10.6	10.2 J	0.0025 U	0.0025 UJ	19.9
I22	03649	20.0	0.89	13.8	12.8 J	0.0025 U	0.0025 UJ	7.9
I23	03641	8.7	1.01	8.9	7.68 J	0.0026 U	0.0026 UJ	50.5
I23	03646	11.8	0.21 U	1.38	1.36 J	0.0025 U	0.0025 UJ	5.2
I23	03692	8.6	1.19	1.24 J	1.20	0.0030 U	0.0017 J	16.8
I23	03693	5.7	0.63	0.55 J	0.63 J	0.0025 U	0.0025 U	1.7 J
I23	03694	10.2	0.23 J	0.28 J	0.46 J	0.0025 U	0.0025 U	3.5 J
I23	03695	10.5	0.70	3.49	4.02	0.0025 U	0.0025 U	3.3 J
I23	03696	6.7				0.0030 U	0.0030 U	15.5
I23	04205	14.7	1.66	3.81	4.23	0.0026 U	0.0026 U	18.8 J
I23	04226	11.5	0.19 J	1.86	1.13	0.0026 U	0.0026 U	4.3 J
I23	04229	14.7	0.18 J	3.50	3.30	0.0026 U	0.0026 U	3.8 J
J22	04203	20.6	0.57	3.16	2.56	0.0026 U	0.0026 U	12.5 J
J22	04204	17.5	0.67	2.13	1.85	0.0027 U	0.0027 U	6.1 J
J23	04211	9.2	0.73	3.75	3.26	0.0025 U	0.0025 U	1.3 J
J23	04212	21.6	0.115 J	7.48	5.75	0.0025 U	0.0025 U	17.5 J
J23	04213	18.2	0.15 J	1.19 J	1.21	0.0026 U	0.0026 U	2.4 J
J23	04214	15.1	0.27 J	2.64	2.60	0.0026 U	0.0026 U	2.7 J

Cell 8-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
J23	04215	12.0	0.53	0.46 J	0.54 J	0.0026 U	0.0026 U	7.9 J
J23	04216	5.4	0.21 J	1.68 J	1.17 J	0.0025 U	0.0025 U	2.1 J
J23	04219	20.6	0.74	4.32	4.38	0.0026 U	0.0026 U	16.2 J
J23	04220	17.2	0.19 J	1.40	1.61	0.0026 U	0.0026 U	7.0 J
J23	04221	14.2	0.21 U	1.78	1.59	0.0026 U	0.0026 U	2.3 J
J23	04222	11.2	0.32 J	0.58 J	0.42 J	0.0026 U	0.0026 U	2.8 J
J23	04223	7.7	1.22	1.40	1.63	0.0030 U	0.0030 U	20.5 J
J23	04225	13.9	0.34 J	1.48 J	1.61	0.0026 U	0.0026 U	10.3 J
J23	04228	17.0	0.23 J	2.56	2.54	0.0026 U	0.0026 U	13.8 J

Cell 8-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

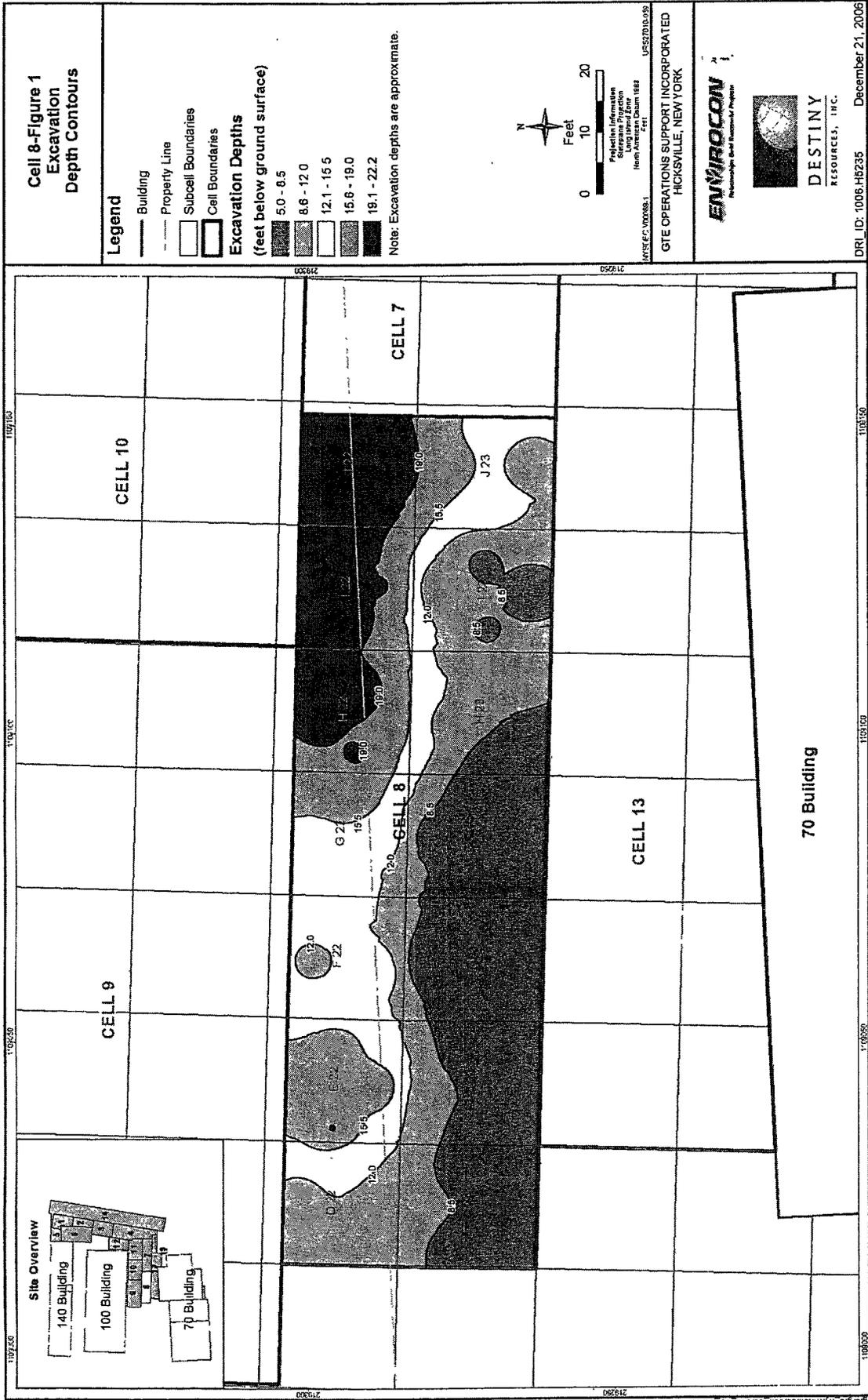
U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 8-Figures 6a and 6b for sample ids and associated locations.



**Cell 8-Figure 1
Excavation
Depth Contours**

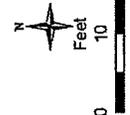
Legend

- Building
- Property Line
- Subcell Boundaries
- Cell Boundaries

**Excavation Depths
(feet below ground surface)**

- 5.0 - 8.5
- 8.6 - 12.0
- 12.1 - 15.5
- 15.6 - 19.0
- 19.1 - 22.2

Note: Excavation depths are approximate.



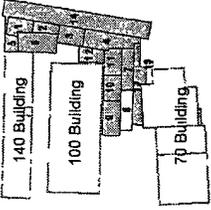
MST/EC: V000881
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK
 U.S. 2010.03.08



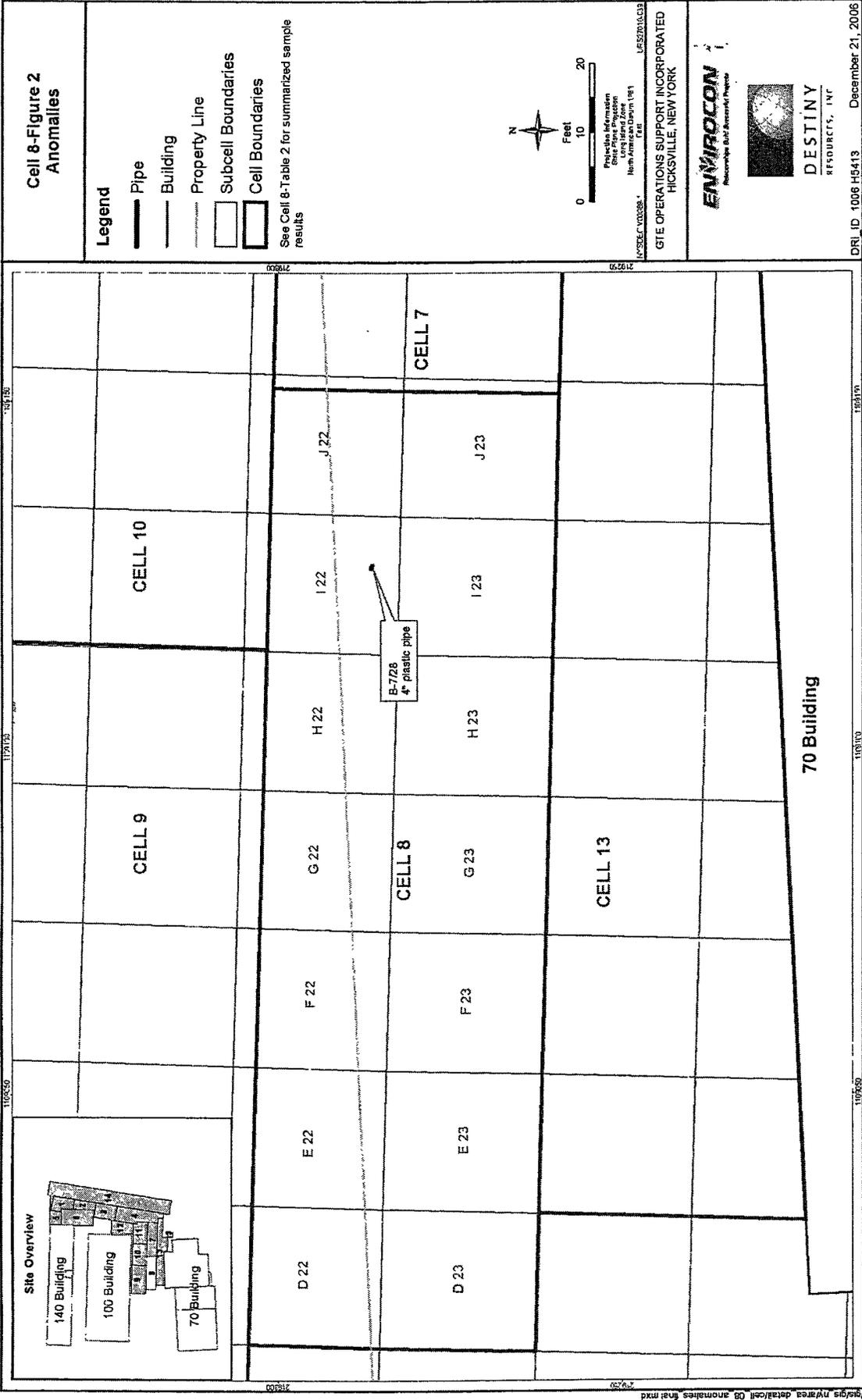
**DESTINY
RESOURCES, INC.**

DRL ID: 1006.HB235 December 21, 2006

Site Overview



g:\gys\my\mth\cell_08\cell_08_contours.mxd



**Cell 8-Figure 2
Anomalies**

Legend

- Pipe
- Building
- Property Line
- Subcell Boundaries
- Cell Boundaries

See Cell 8-Table 2 for summarized sample results



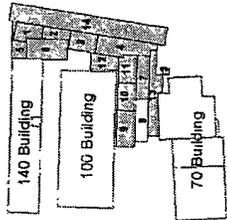
Project Information
 State Pipeline Program
 West of the River
 North American Division (NAD)
 East
 LRS2701AG3
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

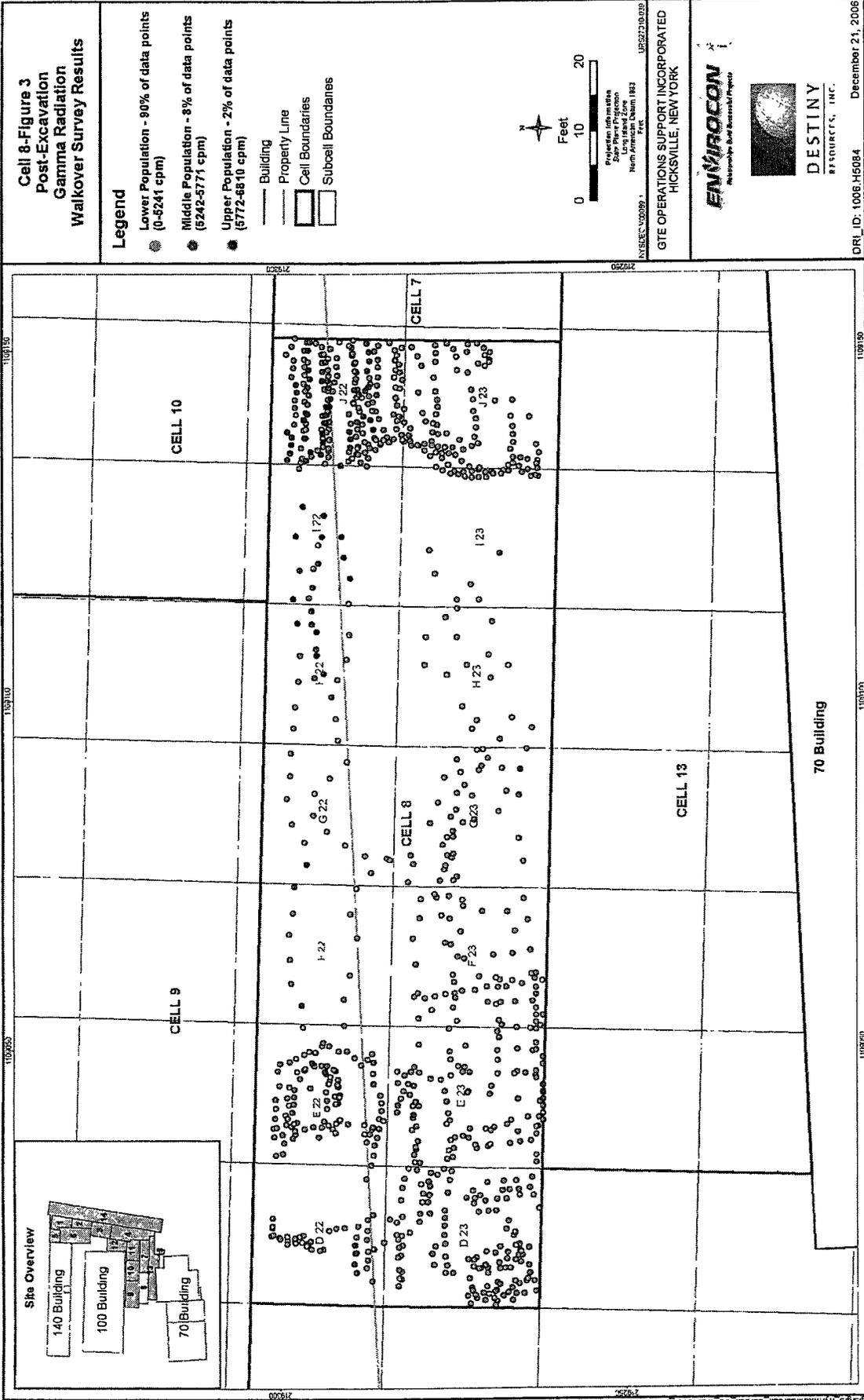


**DESTINY
RESOURCES, INC.**

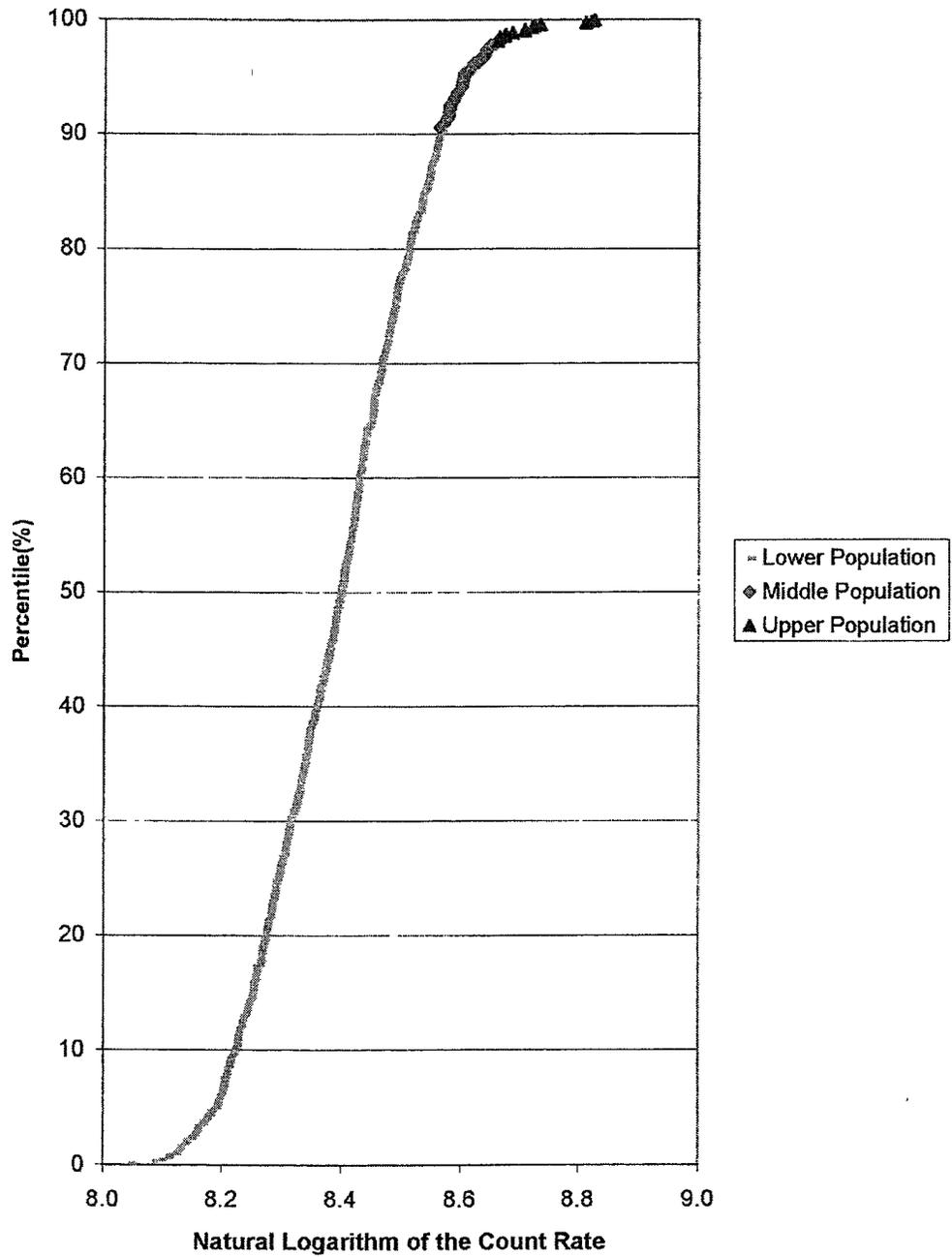
DR#_ID_1006 H5413 December 21, 2006

Site Overview





Cell 8-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



Cell 8-Figure 6a
(Subcells D22 to G22
and D23 to G23)
Verification Wall
Sample Locations and Results

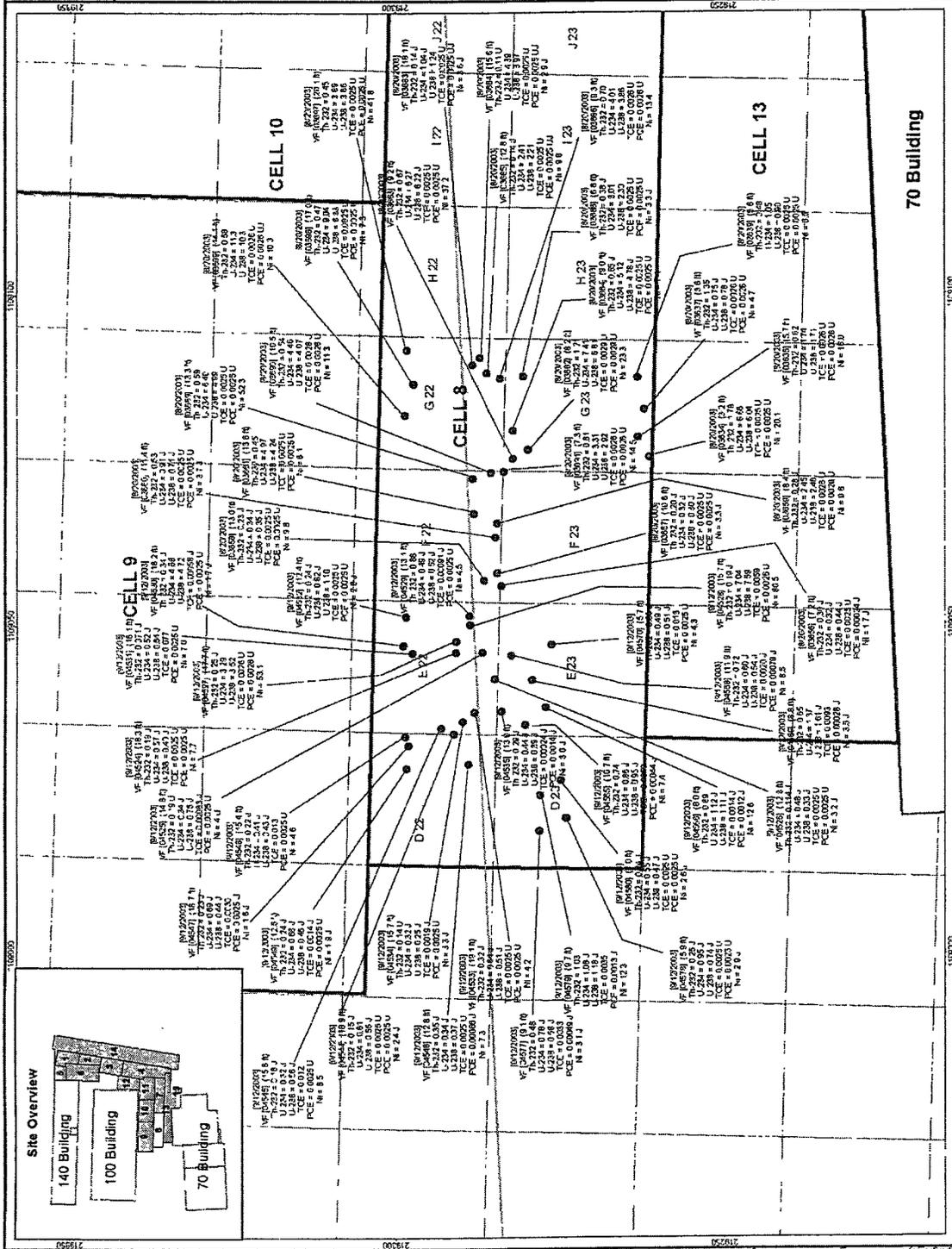
Legend

- Sample Locations
- ▭ Building
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key
[Date] Sample Type [Sample ID] (Depth)
Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

See Cell 8-Table 5 for summarized sample results.



Project Information
Long Island City, NY
North American Division (NAD)
PCE
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

ENVIROCON
Relationships Build Successful Projects

DESTINY
TECHNOLOGY, INC.

DRI ID: 1006.H6338 December 21, 2006

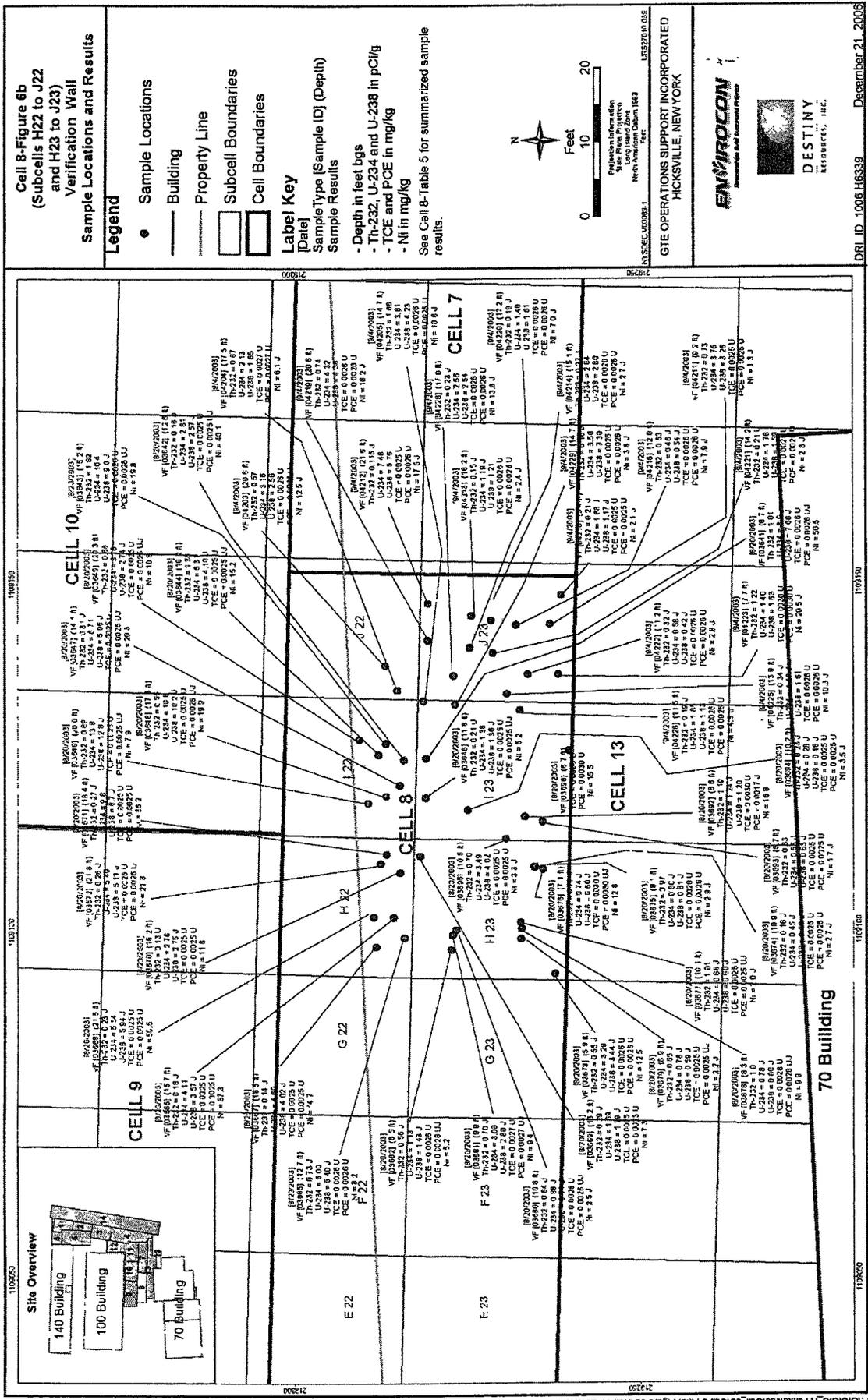


FIGURE 6b: Final Figure 6b Wall VF Locations (H1 mxd)



"Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>

09/29/2003 03:40 PM

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: ProRadCon@aol.com, "Robert Stewart"
<rrstewar@gw.dec.state.ny.us>
Subject: Former Sylvania Site - Cell 8

We have reviewed the confirmation sample data from the walls and floor of cell 8. We agree that these results are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling this cell. Once we have received your data package for this cell, we will send a formal response.

Barbara Youngberg
Chief, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003397



October 27, 2003

Jean Agostinelli
GTE Operations Support Inc.
140 Cantiague Rock Road
Hickville, NY 11801

Re: 1) Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack
2) Borrow Soils - Mercy Hospital Stockpile
3) Borrow soils - Round Swamp and Winding Stockpile

Dear Ms. Agostinelli:

The Department has reviewed the above borrow soils reports and has the following recommendations:

1) **Borrow Soils - 111 Pit, JDP Stock Pile 2, and Commack**

- ▶ **Commack:** I recommend that you do not use the soils from Commack due the detection of 140 ppm of chromium in one of the characterization samples.
- ▶ **111 Pit:** I noticed that one of the characterization samples detected 120 ppb of benzo(a) pyrene. This detection is above the TAGM-4046 recommended cleanup objective of 61 ppb for this compound. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentration of the contaminant. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TICs were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

- ▶ **JDP Stock Pile 2:** Regarding chemical considerations, I have no objections to you using these soils as backfill. I am awaiting Jerry Riggi's radiological evaluation of these borrow soils. His evaluation will be forwarded to you, when available.

2) Borrow Soils - Mercy Hospital Stockpile

Two of the characterization samples detected 290 ppb and 100 ppb of benzo(a) pyrene. One of these samples also detected 290 ppb of benzo(a) anthracene. The TAGM-4046 recommended cleanup objectives for benzo(a) pyrene and benzo(a) anthracene are 61 ppb and 224 ppb, respectively. However, this very slight contamination may be due to trace oil leakage from the machinery or vehicles used at this location. In that case, the contamination could be limited to the immediate surface soils. If that were the case, the excavation and backfilling of these soils will sufficiently mix these soils so that this very minor amount of contamination is distributed in a much larger volume of soils, thereby reducing the concentrations of the contaminants. If there is no visible staining in these borrow soils and you believe that this minor contamination is limited to the surface soils, the Department has no objections to you using these soils as backfill.

If TIC were reported on the SVOC analysis, I would check to make sure that the total concentration for SVOC TICs is less than 500 ppm. (Total carcinogenic SVOCs should be less than 50 ppm.)

I would also like to note that 100 ppb of PCBs was detected in one of the samples. This concentration is well below the TAGM -4046 cleanup objective. However, I would check the historical use of the property from where this stockpile originated to see if PCBs were historically used there. Additional characterization samples for PCBs are recommended if PCB usage is discovered.

3) Borrow Soils - Round Swamp and Winding Stockpile

Based on the results of the three characterization samples, the Department has no objections to you using these soils as backfill. However, please note that, based on figure 1, this stockpile is located near to the entrance to the inactive hazardous waste site known as Old Bethpage Landfill (Site # 130001). This landfill historically received municipal and industrial wastes. I recommend that you verify that the stockpiled soils could not have been impacted by the former operations at this landfill.

Please note that it is your responsibility to adequately characterize the borrow soils. My above recommendations are made under the assumption that your characterization samples accurately reflect the concentrations present in the large volume of soils evaluated.

If you have any questions, please do not hesitate to call me at (631) 444-0244.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc by e-mail: W. Parish
J. Riggi

Cell 8 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 8, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 8 consists of subcells D22 to J22 and D23 to J23. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the floor VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 8 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 56 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern. The sample results for each of the 56 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 8 (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 56 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

The third report is on pages 8 through 12 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 5 of the report (Attachment page 12) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.32. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 8

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
04540	0.53	2.80	2.58
04541	0.37 J	0.63	0.63 J
04542	0.68	1.10	1.07
04543	0.30 J	1.06	0.88
04573	0.45	0.67 J	0.74 J
04574	0.43	0.60 J	0.47 J
04575	0.37 J	0.99 J	1.07 J
04576	0.30 J	0.93 J	0.97 J
04536	0.21 U	0.70 J	1.05
04537	0.25 J	3.70	3.65
04538	0.25 J	0.50 J	0.26 J
04539	0.18 J	1.69	1.02
04560	0.71	0.80 J	0.67 J
04561	0.26 J	0.40 J	0.35 J
04562	0.21 J	0.36 J	0.48 J
04564	0.40 J	0.48 J	0.65 J
02831	0.60	8.7	9.9 J
02832	0.31 J	6.17	6.61 J
02833	0.27 J	7.88	8.36 J
02834	0.60	4.18	3.97 J
02598	0.48	0.68 J	0.99 J
02600	0.44	0.54 J	0.67 J
02599	0.34 J	1.49	1.33
02601	0.42	0.29 J	0.39 J
02836	0.61	8.22	7.86 J
02854	0.53	9.6	9.0 J
02853	0.58	8.7	8.6 J
02855	0.33 J	7.59	7.37 J
02610	0.38 J	0.98 J	1.23
02609	0.71	1.40	0.70 J
02611	0.74	0.83 J	0.74 J
02612	1.19	1.44	1.43
02765	1.44	5.93	5.21
02766	0.43	9.3 J	8.1 J
02767	0.35 J	6.7 J	5.45 J
02768	0.42	4.80	4.00
02772	0.44	1.08 J	0.64 J
02773	0.21 J	1.55	1.47
02774	1.14	0.95 J	0.98 J
02775	0.20 J	0.76 J	0.30 J
02806	0.46	2.61	1.91
02807	0.21 J	2.04 J	1.13 J
02808	1.10	9.5	8.6
02809	0.51	4.58	3.59

Table C.1

Cell 8

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
02810	0.74	5.09	4.28
02811	0.55	4.28	4.16
02812	1.11	3.66	3.34
02813	0.69	1.88	2.14
04198	0.36 J	4.12	3.35
04199	0.78	8.47	8.19
04197	0.79	3.70	3.37
04200	0.54	3.48	3.56
04206	0.14 J	3.34	3.29
04207	0.66	3.12	2.73
04209	1.08	13.1	12.5
04210	0.25 J	1.53	1.40

Notes:

Cell area = 534 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
 Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
 Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
				U-234	Surface Soil
3,000	1.01				
1,000	1.04				
300	1.43				
100	2.27				
30	5.73				
10	11.1				
3	18.3				
1	30.5				
U-238	Surface Soil	50.00	No		
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

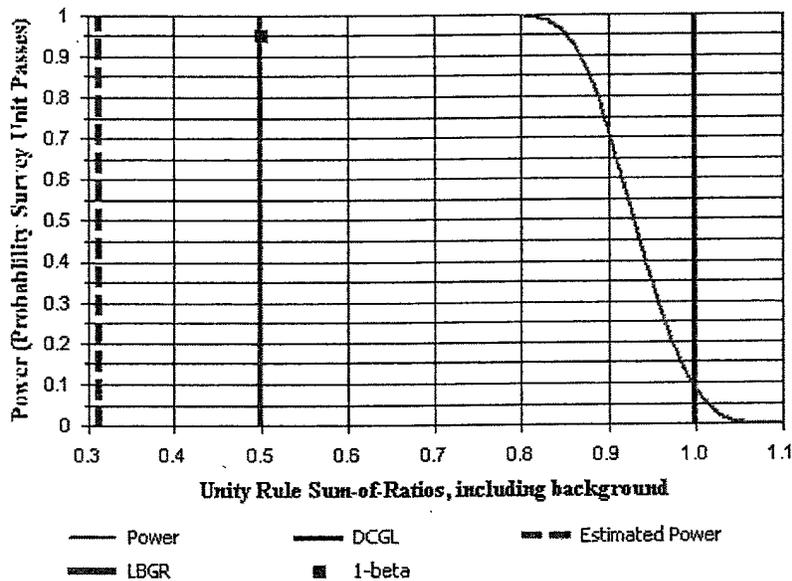


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 8 Status Report with STL Data		
Comments:			
Area (m ²):	534	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.14
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.31
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.5 \pm 0.3	N/A
U-234	3.5 \pm 3.2	N/A
U-238	3.2 \pm 3.1	N/A

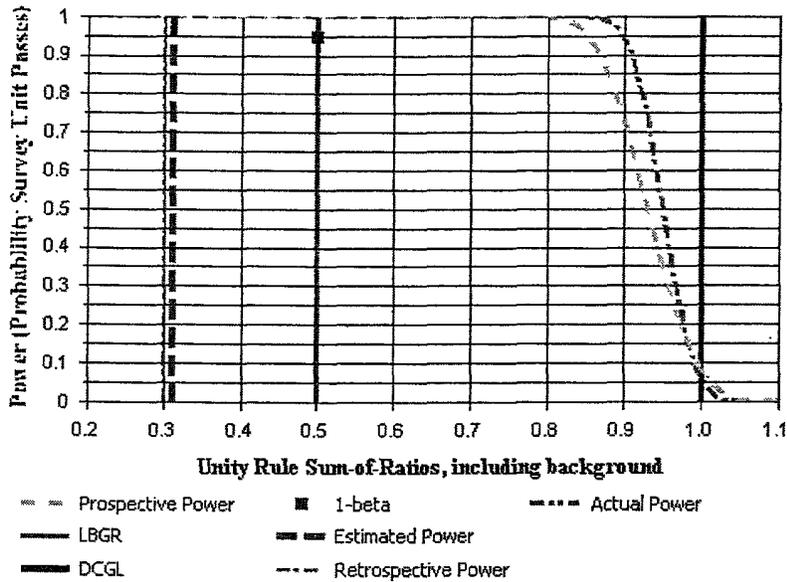


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 8 Status Report with STL Data
Report Number: 1
Survey Unit Samples: 56
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
04540	S	0.53	2.8	2.58
04541	S	0.37	0.63	0.63
04542	S	0.68	1.1	1.07
04543	S	0.3	1.06	0.88
04573	S	0.45	0.67	0.74
04574	S	0.43	0.6	0.47
04575	S	0.37	0.99	1.07
04576	S	0.3	0.93	0.97
04536	S	0.21	0.7	1.05
04537	S	0.25	3.7	3.65
04538	S	0.25	0.5	0.26
04539	S	0.18	1.69	1.02
04560	S	0.71	0.8	0.67
04561	S	0.26	0.4	0.35
04562	S	0.21	0.36	0.48
04564	S	0.4	0.48	0.65
02831	S	0.6	8.7	9.9
02832	S	0.31	6.17	6.61
02833	S	0.27	7.88	8.36
02834	S	0.6	4.18	3.97
02598	S	0.48	0.68	0.99
02600	S	0.44	0.54	0.67
02599	S	0.34	1.49	1.33
02601	S	0.42	0.29	0.39
02836	S	0.61	8.22	7.86
02854	S	0.53	9.6	9
02853	S	0.58	8.7	8.6
02855	S	0.33	7.59	7.37
02610	S	0.38	0.98	1.23
02609	S	0.71	1.4	0.7
02611	S	0.74	0.83	0.74
02612	S	1.19	1.44	1.43
02765	S	1.44	5.93	5.21
02766	S	0.43	9.3	8.1
02767	S	0.35	6.7	5.45
02768	S	0.42	4.8	4
02772	S	0.44	1.08	0.64
02773	S	0.21	1.55	1.47
02774	S	1.14	0.95	0.98
02775	S	0.2	0.76	0.3
02806	S	0.46	2.61	1.91
02807	S	0.21	2.04	1.13
02808	S	1.1	9.5	8.6
02809	S	0.51	4.58	3.59
02810	S	0.74	5.09	4.28
02811	S	0.55	4.28	4.16
02812	S	1.11	3.66	3.34
02813	S	0.69	1.88	2.14
04198	S	0.36	4.12	3.35
04199	S	0.78	8.47	8.19
04197	S	0.79	3.7	3.37



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
04200	S	0.54	3.48	3.56
04206	S	0.14	3.34	3.29
04207	S	0.66	3.12	2.73
04209	S	1.08	13.1	12.5
04210	S	0.25	1.53	1.4

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
04540	S	0.3
04541	S	0.16
04542	S	0.29
04543	S	0.15
04573	S	0.19
04574	S	0.17
04575	S	0.17
04576	S	0.15
04536	S	0.11
04537	S	0.24
04538	S	0.1
04539	S	0.12
04560	S	0.28
04561	S	0.11
04562	S	0.09
04564	S	0.17
02831	S	0.59
02832	S	0.37
02833	S	0.42
02834	S	0.38
02598	S	0.2
02600	S	0.18
02599	S	0.18
02601	S	0.16
02836	S	0.54
02854	S	0.56
02853	S	0.55
02855	S	0.42
02610	S	0.18
02609	S	0.3
02611	S	0.3
02612	S	0.48
02765	S	0.74
02766	S	0.5
02767	S	0.37



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
02768	S	0.33
02772	S	0.19
02773	S	0.14
02774	S	0.45
02775	S	0.09
02806	S	0.25
02807	S	0.14
02808	S	0.75
02809	S	0.35
02810	S	0.45
02811	S	0.37
02812	S	0.54
02813	S	0.33
04198	S	0.28
04199	S	0.61
04197	S	0.42
04200	S	0.33
04206	S	0.18
04207	S	0.35
04209	S	0.9
04210	S	0.15



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	56	N/A	N=13
Mean (SOR)	0.32	N/A	0.31
Median (SOR)	0.30	N/A	N/A
Std Dev (SOR)	0.19	N/A	0.14
High Value (SOR)	0.90	N/A	N/A
Low Value (SOR)	0.09	N/A	N/A

Cell 9 Status Report

INTRODUCTION

Cell 9 is comprised of subcells C20 to H20, C21 to H21 and the southern portion of subcells C19 to H19. Cell 9 is located in the southern portion of the 100 Property (Cell 9-Figure 1 and Figure 6 in Volume I). Excavation and related activities in Cell 9 began on May 25, 2004 and were completed on September 23, 2004. Verbal approval to backfill Cell 9 was received from NYSDEC representatives on August 5, 2004 and documented in an e-mail on August 20, 2004 (Cell 9-Attachment A). A formal request to backfill Cell 9 was submitted in a report to NYSDEC titled *Cell 9 – Attainment of Radiological and Chemical Cleanup Levels* dated August 23, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces and soil samples.

Cell 9 was backfilled beginning August 13, 2004 and was completed on September 2, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 2). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in two reports. The first report was titled *Borrow Soils Characterization Survey and Sampling: Spagnoli Road (SPAG2), Melville, NY*, dated March 24, 2004. Approval to use these soils for backfill was granted from NYSDEC in a letter dated April 1, 2004 (Cell 9-Attachment B, page 1). The second report addressed the use of additional volume from the same backfill source and was titled *Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road (SPAG2), Melville, NY* dated July 12, 2004. Approval to use additional volumes from the same backfill source was granted from NYSDEC in a letter dated July 29, 2004 (Cell 9-Attachment B, page 2).

DEPTHS OF EXCAVATION

Cell 9 was excavated to depths ranging from ground surface to approximately 43 ft below ground surface (bgs) with the majority of the excavation ending between 16 to 26 ft bgs. The excavation depths for each of the above subcells are provided in Table 1 and are shown on Cell 9-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) In order to remove soils in an area of deep elevated radionuclide and nickel impacts, a steel sheet box was constructed in subcell G20 (extending into subcell G21). This engineering design allowed the excavation of materials from a depth of approximately 26 ft bgs to a depth of approximately 43 ft bgs. In addition, an open trench was excavated in subcell G21 from approximately 26 ft bgs to approximately 33 ft (Cell 9-Figure 1). A total of 17,173,570 pounds of soil and debris (791 Lift Liners™) were removed from Cell 9 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 9, various anomalies were encountered. The anomalies were pipes, wood, concrete from drywells and leaching pools and other construction debris. A list of Cell 9 anomalies along with analytical results from anomaly samples is provided in Cell 9-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 9-Figure 2. All of the anomalies encountered during the excavation activities in Cell 9 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER SURVEY

Once excavation activities were completed in Cell 9, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 9-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the Laser Positioning System to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 9-Figure 4 depicts a CFD plot of the 479 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 9-Figure 5) to evaluate if the remaining unexcavated soil surfaces met Site cleanup levels. The confirmation that radiological Site cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Cell 9-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the following exceptions.

- G20 – The C sample; and
- G21 – The A, C, and D samples.

These locations were inaccessible for VF sampling as they required immediate backfilling to 26 ft bgs following excavation to maintain the integrity of the excavation. Using the sheet box and open trench, these deeper excavations in G20 and G21 were extended from the excavation floor (at approximately 26 ft bgs) to final depths that ranged from 33 to 43 ft bgs. Since VF samples could not be collected from these four sample locations, DL samples were selected that best

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

represented the location of the associated A, C, or D VF samples at or near the depth of the excavation floor. The use of these DL samples to represent the VF samples is consistent with the practice performed in previously excavated cells with NYSDEC concurrence.

To maintain sampling consistency of one VOC sample per subcell at final excavation depth, the DL sample from G20 was used in lieu of a VF sample that had been previously sent to STL for VOC analysis. There was no sample in G21 that could be used to represent the excavation floor, however, no elevated PID readings were observed for the DL samples collected in subcell G21. At the final depth for two borings in G21, an SP sample was collected and sent to STL for VOCs and nickel analyses.

All VF samples were analyzed by STL to demonstrate compliance with the cleanup levels. The radiological samples were analyzed by alpha spectroscopy using NAS Method U-NAS-NS-3050, TH-NAS-NS-3004, or DOE Method RP-725. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Focused soil sampling was conducted in Cell 9 following excavation to evaluate if elevated nickel was present below design excavation depths. Although started immediately following excavation, the completion of soil sampling was postponed until backfilling was concluded. Samples were collected from borings starting at 1 foot below the excavated surface at 1-foot increments using a hand auger prior to backfilling and a hollow stem auger drill rig with split spoon sampling post backfilling (Cell 9-Figure 6). SP samples were collected from what was anticipated to be the bottom of each boring (typically at approximately 30 ft). All other samples were DL samples. Based on elevated nickel results in some borings, additional augering and sampling was conducted. In these borings, at least one additional DL sample from between 45 and 50 ft bgs was collected and analyzed for nickel. (Cell 9-Figure 8).

SYSTEMATIC SOIL SAMPLING

Systematic soil sampling was performed below the excavation depths along the north, south and west walls of Cell 9 to delineate residual uranium and nickel believed to be associated with historic leaching pools. The first row of sample points along the north and west walls were approximately 5 ft from the sheet pile wall and the second row was approximately 15 ft from the sheet pile wall. One row of samples was collected along the south wall approximately 4 ft north of the wall (Cell 9-Figure 7). At each sample point, a soil boring was advanced from the excavated depth to a final depth of approximately 30 ft bgs. Samples were collected at 1-foot intervals. A total of 37 soil borings were completed.

Samples from borings conducted subsequent to the Phase I soil remediation indicated that some constituents remain above their respective cleanup levels below the design engineering limits. The results were separately reported to NYSDEC in Table 2 of *Systematic Subsurface Soil Sampling and Analysis Report, Cell 9 Subsurface Soil Delineation*, Rev 1: October 2005.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 9-Table 3 and are shown on Cell 9-Figure 5. Cell 9-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the focused soil samples are provided in Cell 9-Table 5 and the boring locations are shown on Cell 9-Figure 6. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the systematic soil samples are provided in Cell 9-Table 6 and the boring locations are shown on Cell 9-Figure 7. The nickel results for off-Site STL analyses of the focused nickel soil samples are provided in Cell 9-Table 7 and the boring locations are shown on Cell 9-Figure 8.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 9, passed this evaluation (Cell 9-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the Site cleanup levels were attained for Cell 9 with the exception of residual nickel impacts and one sample with residual uranium.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 9-Table 1:	Cell 9 Subcell Excavation Depths
Cell 9-Table 2:	Cell 9 Anomaly Sample Results
Cell 9-Table 3:	Cell 9 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 9-Table 4:	Cell 9 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 9-Table 5:	Cell 9 Focused Soil Boring Sample Results
Cell 9-Table 6:	Cell 9 Systematic Soil Boring Sample Results
Cell 9-Table 7:	Cell 9 Focused Nickel Sample Results Severn Trent Laboratories, Inc.

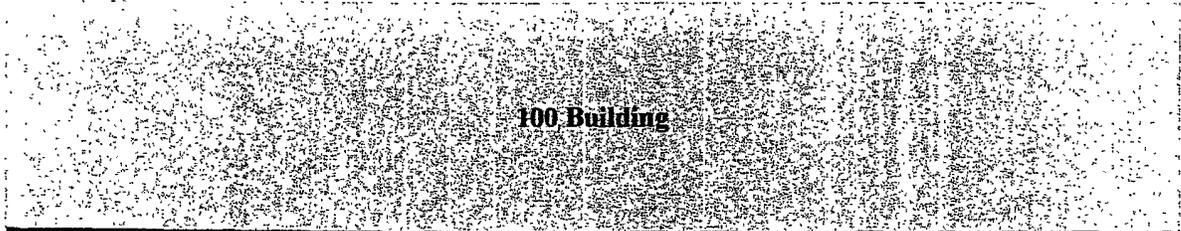
Figures

Cell 9-Figure 1:	Cell 9 Excavation Depth Contours
Cell 9-Figure 2:	Cell 9 Anomalies
Cell 9-Figure 3:	Cell 9 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 9-Figure 4:	Cumulative Frequency Distribution for Cell 9 Gamma Radiation Walkover Survey Data
Cell 9-Figure 5:	Cell 9 Verification Floor Sample Locations and Results
Cell 9-Figure 6:	Cell 9 Focused Soil Boring Locations
Cell 9-Figure 7:	Cell 9 Systematic Soil Boring Locations
Cell 9-Figure 8:	Cell 9 Focused Nickel Sample Locations and Results

Attachments

Cell 9-Attachment A:	E-Mail from NYSDEC to GTEOSI dated August 20, 2004
Cell 9-Attachment B:	Letters from NYSDEC to GTEOSI and April 1, 2004 and July 29, 2004
Cell 9-Attachment C:	Cell 9 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 9-Table 1
Subcell Excavation Depths**



C19	D19	E19	F19	G19	H19	Cell 10
0 - 6 ft.	0 - 11 ft.	0 - 16 ft.	6 - 21 ft.	16 - 26 ft.	16 - 26 ft.	
C20	D20	E20	F20	G20	H20	
0 - 11 ft.	6 - 21 ft.	6 - 21 ft.	11 - 26 ft.	16 - 43 ft.	21 - 42 ft.	
C21	D21	E21	F21	G21	H21	
0 - 12 ft.	11 - 21 ft.	16 - 21 ft.	16 - 26 ft.	21 - 43 ft.	21 - 42 ft.	
C22	D22	E22	F22	G22	H22	

Cell 8

Notes:
Excavation depths are approximate.
 — Subcell Boundary
 — Cell Boundary

Cell 9-Table 2
Anomaly Sample Results

Pipe	Date	ID	Material	Location	Depth (ft)	Diameter (in)	Length (ft)	Notes	Count	Rate (cpm)	Background (cpm)	Net Count	Net Rate (cpm)	Standard Deviation (cpm)	Upper Control Limit (cpm)	Lower Control Limit (cpm)	Remarks
Pipe	5/29/2004	H20	Ti (L) 4" (dia)	Under	3.5	4	4.07	NA	112	4.07	82.31	3,000	<MCA	0.843	0.194	NS	
Leaching Pool	7/1/2004	H20D20	12" (dia)	Under	20	20	11.14	NA	<0.04	0.78	11.14	2,145	NS	0.0028 U (STL)	0.0028 U (STL)	20.1 J (STL)	
Leaching Pool	8/10/2004	H20D20	12" (dia)	Inside	14.5	14.5	18.04	NA	1.01	18.04	343.45	31,500	NS	0.061 J (STL)	0.061 J (STL)	17600 (STL)	
Pipe	5/29/2004	H20	2" (dia) 10" (L)	Under	1.5	2	8.85	NA	1.20	8.85	187.58	40,000	30	1.788 J	0.328 J	NS	
Leaching Pool	8/1/2004	G20031	9" (dia)	Inside	3	6	153.78	NA	10.70	153.78	2619.81	843,000	NS	10.238 J	40.358 J	NS	
Leaching Pool	7/1/2004	G20031	9" (dia)	Under	3 to 20.5	24	0.81	NA	0.24	0.81	9.05	2,053	NS	0.0028 U (STL)	0.0028 U (STL)	453 J (STL)	
Leaching Pool	6/23/2004	G20031	9" (dia)	Bottom	3 to 20.5	20.5	0.47	NA	<0.04	0.47	7.42	15,700	NS	0.0028 F (STL)	0.00013 U (STL)	872 J (STL)	
Dry Well	8/1/2004	G21052	12" (dia)	Under	6	20.5	0.80	NA	0.44	0.80	<5.81	15,897	NS	0.0045 J (STL)	0.0028 U (STL)	4.3 (STL)	
Dry Well	8/1/2004	G21052	12" (dia)	Inside	6	18.6	0.38	NA	0.48	0.38	<3.40	NS	NS	0.0028 J (STL)	0.0028 U (STL)	0.6 (STL)	One gamma count rate for samples 18923, 18922
Dry Well	8/1/2004	F21072	12" (dia) 14" height	Inside	14	15	0.87	NA	0.73	0.87	10.85	17,405	NS	0.071 (STL)	0.021 U (STL)	83.3 (STL)	
Dry Well	8/1/2004	F21072	12" (dia) 14" height	Under	14	17.5	0.18	NA	0.22	0.18	2.04 UJ	NS	NS	0.0028 U (STL)	0.0028 U (STL)	8.9 (STL)	One gamma count rate for samples 18922, 18923
Pipe	8/1/2004	G200H20	3" (dia)	Inside	3	3	152.88	NA	29.82	152.88	2894.26	175,000	NS	0.292 J	0.688 J	NS	
Pipe	8/1/2004	G200H20	3" (dia)	Under	3	3	2.78	NA	98.13	2.78	<43.31	NS	NS	0.0028 U (STL)	0.0028 U (STL)	NS	One gamma count rate for samples 18927, 18928
Historic Building Structure	7/1/2004	G180410	7.5" (L), 8" (H) Height, 6.5" Depth	Under	3.5	18	0.31	NA	0.43	0.31	3.42	464	NS	0.0028 J (STL)	0.0028 U (STL)	18 J (STL)	
Historic Building Structure	8/1/2004	H180519	8.5" (L), 17" (H) Height, 6.5" Depth	Under	3.5	7	0.97	NA	0.82	0.97	13.77	NS	NS	0.027 (STL)	0.027 (STL)	76.5 (STL)	
Historic Building Structure	8/2/2004	G180419	7.5" (L), 8" (H) Height, 6.5" Depth	Bottom	3.5	8	58.13	NA	42.18	58.13	970.85	368,000	NS	84 J (STL)	84 J (STL)	1000 (STL)	
Historic Building Structure	8/2/2004	G180419	7.5" (L), 8" (H) Height, 6.5" Depth	Under	3.5	10	0.28	NA	0.28	0.28	4.13	NS	NS	0.0028 J (STL)	0.0028 U (STL)	26.3 (STL)	One gamma count rate for samples 18750, 18751
Historic Building Structure	8/1/2004	H180519	6.5" (L), 17" (H) Height	Side	3.5	4	3.98	NA	3.13	3.98	73.18	NS	NS	5.715 J	0.884 U	NA	

Cell 9-Table 2
Anomaly Sample Results

Historic Building Structure Agency	Date	Sample ID	Material	Depth	Count	Location	MA	2.87	74.28	0.632	NS	NS	0.0046 (STL)	0.0016 J (STL)	1180 (STL)	
	6/12/2004	95037	Concrete	2'x10"	5	Under	2.44	NA	2.87	74.28	NS	NS	0.0046 (STL)	0.0016 J (STL)	1180 (STL)	
Pipe	6/15/2004	95038	Tronite	8" (6a)	7	Under	0.88	NA	<0.04	21,290	NS	NS	0.008 U	0.008 U	NS	
Pipe	6/14/2004	95038	Tronite	8" (6a)	8	Inside	0.78	NA	0.42	4,500	NS	NS	0.001 U	0.001 U	NS	
Pipe	6/16/2004	95038	Tronite	8" (6a)	6	Inside	0.51	NA	0.25	5,138	NS	NS	0.001 U	0.001 U	NS	
Pipe	6/16/2004	95038	Tronite	8" (6a)	6	Under	0.93	NA	0.31	1,878	NS	NS	0.008	0.008 U	NS	
Pipe	6/17/2004	95039	Plastic	10" (6b) 10" long	8	Under	1.75	NA	1.81	<8KG	NS	NS	0.783 D	0.114	NS	
Dry Well	NS	95042	Dry Well (Block)	8" (6a)	NS	NS	NS	NS	NS	80,000	NS	NS	NS	NS	NS	Scale inside appear to have entered structure during excavation.
Dry Well	7/12/2004	95045	Concrete Dry Well	8" (6a)	16.0	Inside	1.82	NA	10.88	235.24	NS	NS	240 J (STL)	0.17 J (STL)	55009 J (STL)	Suspected National Leaching pool, noted in field as dry well
Dry Well	7/12/2004	95043	Concrete Dry Well	8" (6a)	20.0	Under	0.21	NA	1.26	21.70	NS	NS	0.028 U (STL)	0.028 U (STL)	2160 J (STL)	One gamma count site for samples 16396, 16397
Dry Well	NS	95043	Concrete Dry Well	8" (6a)	NS	NS	NS	NS	NS	50,000	NS	NS	NS	NS	NS	
Leaching Pool	7/6/2004	95045	Leaching Pool Historic	8" (6a)	9	Inside	0.32	NA	0.57	18,218	NS	NS	0.00031 J (STL)	0.00071 U (STL)	563 (STL)	
Leaching Pool	7/6/2004	95045	Leaching Pool Historic	8" (6a)	11	Under	0.23	NA	<0.04	3.13 J	NS	NS	0.0028 U (STL)	0.0028 U (STL)	687 (STL)	One gamma count site for samples 16396, 16397.

**Cell 9-Table 2
Anomaly Sample Results**

Analysis:	
Th-232 - Thorium-232	TCE - Trichloroethane
U-234 - Uranium-234	PCE - Tetrachloroethane
U-235 - Uranium-235	Ni - Nickel
U-238 - Uranium-238	
Unit:	
pCi/g - picocurie/gram	cpm - counts per minute
mg/kg - milligram/kilogram	dpm/100 cm ² - disintegrations per minute/100 square centimeters
Qualifier:	
R - Validation qualifier used to indicate that the result is considered unreliable.	
U - Validation qualifier used to indicate that the result was qualified as non-detected.	
J - Validation qualifier used to indicate that the result is considered an estimate.	
L - Validation qualifier used to indicate that the result was qualified as non-estimated and the associated reporting limit is considered an estimate.	
D - Validation qualifier used to indicate that analysis was performed on a sample requiring dilution.	
C - Validation qualifier (for on-site radiological constituents) used to indicate that the result was qualified as non-detected.	
Notes:	
See Cell 9-Figure 2 for sample locations.	
Samples were analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.	
NA - Analysis was not performed.	
NS - Not sampled.	
(STL) - Results are from Sevens Trent Laboratories, Inc.	
MDA - Minimum Detectable Activity	
BKGD - Background	
Due to an error in the laboratory data recording program, the on-site analytical data should be interpreted to two significant figures.	

Cell 9-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (ft)	Pb-232 (ppb)	Pb-234 (ppb)	Pb-210 (ppb)	TCE (mg/kg)	PCF (mg/kg)	Ni (mg/kg)
C19	B	16901	3.5	0.67	4.70	4.59			
C19	C	16902	3.5	0.492	5.76	5.72			
C19	D	16903	2.0	0.52	8.61	7.67	0.0025 U	0.0026	75.6 J
C20	A	16897	4.4	0.47	2.38	2.25	0.0026 U	0.00068 J	94.4 J
C20	B	16898	7.3	0.60	3.83	3.11			
C20	C	16899	4.6	0.461	4.63	4.33			
C20	D	16900	2.5	0.63	5.87	5.77			
C21	A	16904	5.2	0.66	4.01	3.85			
C21	B	16905	8.5	0.365	0.65	0.61	0.0026 U	0.0026 U	8.9 J
C21	C	16906	5.4	0.64	0.60	0.62			
C21	D	16907	2.8	0.56	4.16	4.19			
D19	B	16922	4.2	0.370	3.05	3.00			
D19	C	16923	8.2	0.155	1.61	1.32			
D19	D	16924	4.2	1.37	0.427 J	0.345 J	0.0031 U	0.0031 U	367 J
D20	A	16893	13.0	0.64	3.08	3.06			
D20	B	16894	16.5	0.342	6.61	5.97			
D20	C	16895	15.1	0.400	2.10	2.19	0.0026 U	0.0026 U	64.1 J
D20	D	16896	12.2	0.72	8.49	7.88			
D21	A	16885	16.9	0.437	3.10	2.81			
D21	B	16886	18.8	0.171	0.554	0.495	0.0025 U	0.0025 U	2.8 J
D21	C	16887	16.5	0.128	1.59	1.49			
D21	D	16888	14.6	0.222	0.53	0.55			
E19	B	16925	5.2	0.189	1.95	1.76			
E19	C	16926	8.9	0.124	4.50	4.51			
E19	D	16927	3.5	0.62	7.29	6.93	0.0026 U	0.0026 U	61.6 J
E20	A	16889	15.3	0.308	9.82	9.67			
E20	B	16890	16.3	0.173	53.1	52.3			
E20	C	16891	18.3	0.177	6.44	6.15			
E20	D	16892	17.7	0.241	4.66	4.13	0.0026 U	0.0026 U	329 J
E21	A	16881	18.9	0.274	2.12	1.93	0.0025 U	0.0025 U	18.5 J
E21	B	16882	17.6	0.109	1.25	1.28			
E21	C	16883	17.7	0.150	6.17	6.33			
E21	D	16884	19.2	0.201	0.74	0.67			
F19	B	16932	16.0	0.102	2.05	1.67			
F19	C	16933	17.5	0.171	4.60	4.69			
F19	D	16934	12.0	0.143	7.92	7.62	0.0025 U	0.0025 U	38.4 J
F20	A	16877	19.9	0.61	10.2	9.08			
F20	B	16878	22.6	0.299	8.00	6.96	0.0025 U	0.0025 U	36.7 J
F20	C	16879	19.8	0.482	9.70	8.67			
F20	D	16880	16.1	0.284	31.5	31.1			
F21	A	16873	20.6	0.57 J	12.0	11.0			
F21	B	16874	23.6	0.64	15.3	13.6			
F21	C	16875	22.1	0.162	1.07	1.08			
F21	D	16876	18.7	0.276	7.45	7.24	0.0025 U	0.0025 U	9.5 J
G19	B	16950	16.4	0.237	2.71	2.44	0.0025 U	0.0025 U	8.2 J

Cell 9-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
G19	C	16951	23.0	0.146	9.91	9.09			
G19	D	16952	16.4	0.314	6.01	5.95			
G20	A	16935	25.3	0.531	11.2	10.7			
G20	B	16936	25.9	0.95	13.1	11.6			
G20	C*	17167	42.0	1.25	21.4	18.6	0.0029 U	0.0029 U	2510 J
G20	D	16938	25.5	0.61	23.6	20.4			
G21	A*	16481	34.0	1.50	20.8	16.9			
G21	B	16929	25.6	0.53	7.94	7.10			
G21	C*	16356	27.0	0.147	10.9	8.53			
G21	D*	16397	28.0	0.87	5.18	4.34			
H19	B	16947	16.4	0.343	4.11	3.84			
H19	C	16948	22.1	0.262	4.32	4.38			
H19	D	16949	16.9	0.204	3.42	3.17	0.0026 U	0.0026 U	13.8 J
H20	A	16943	24.2	0.376	9.63	9.37			
H20	B	16944	24.3	0.538	10.0	9.13	0.0025 U	0.0025 U	86.5 J
H20	C	16945	25.3	0.243	8.59	8.56			
H20	D	16946	25.2	0.54	24.5	24.9			
H21	A	16939	25.4	0.216	6.06	5.19	0.0025 U	0.0025 U	16.3 J
H21	B	16940	24.7	0.416	8.78	7.61			
H21	C	16941	25.0	0.57	10.9	9.49			
H21	D	16942	25.4	0.84	9.13	7.22			

Cell 9-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 9-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

* - DL and EX samples selected to represent VF samples. For sample ID number 17167 (subcell G20, location C*) an EX sample was used. For sample ID numbers 16481 (subcell G21, location A*), 16356 (subcell G21, location C*), and 16397 (subcell G21, location D*), samples were obtained from borings (DL samples). Due to a field error in subcell G21, VOCs and Ni samples were not collected.

Cell 9-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (feet)	Subcell
Maximum Th-232 (pCi/g)	1.5	34.0	G21
Maximum U-234 (pCi/g)	53.1	16.3	E20
Maximum U-238 (pCi/g)	52.3	16.3	E20
Maximum TCE (mg/kg)	0.0031 U	4.2	D19
Maximum PCE (mg/kg)	0.0026	2.0	C19
Maximum Ni (mg/kg)	2510 J	42.0	G20

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	M-232 (PC/G)	U-234 (PC/G)	U-238 (PC/G)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E20	DL01	11904	1.0	0.93		22.71			
E20	DL01	11914	2.0	1.21		38.26			
E20	DL01	11915	3.0	0.81		35.22			
E20	DL01	11916	4.0	0.68		15.61 J			
E20	DL01	11917	5.0	0.35		3.74			
E20	DL01	11918	6.0	0.37		5.13 J			
E20	DL01	11919	7.0	0.29		9.31 J			
E20	DL01	11938	8.0	0.28		7.02 UJ			
E20	DL01	11939	9.0	0.24		10.78			
E20	DL01	11940	10.0	0.27		10.74			
E20	DL02	17223	25.0						941 J
E20	DL02	17227	30.0	0.295	7.55	6.86	0.0026 U	0.0026 UJ	94.6 J
E20	DL03	17483	19.0	1.03		21.19			
E20	DL03	17484	20.0	0.73		7.9			342 J
E20	DL03	17485	21.0	0.42		5.79			
E20	DL03	17486	22.0	0.23		3.53			538 J
E20	DL03	17487	23.0	0.34		8.09			
E20	DL03	17488	24.0	0.65		4.38			505 J
E20	DL03	17489	26.0	0.43		1.96			104 J
E20	DL03	17490	27.0	0.93		3.91			
E20	DL03	17491	28.0	0.43		3.23			96.5 J
E20	DL03	17492	29.0	0.53		< 1.32			
E20	DL03	17493	30.0	0.39		2.39			67.3 J
E20	DL03	17494	31.0	< 0.07		1.96			
E20	DL03	17495	32.0	0.46		3.91			64.4 J
E20	DL03	17496	33.0	0.34		1.55			
E20	DL03	17497	34.0	0.35		1.48 J			78.1 J
E20	DL03	17498	35.0	0.3		2.13			
E20	DL03	17499	36.0	0.31		1.91			62.9 J
E20	DL03	17500	37.0	0.43		2.56			
E20	DL03	17501	39.0	0.46		4.17			
E20	DL03	17502	38.0	0.32		2.08			53.0 J
E20	DL03	17503	40.0	0.201	1.43	1.4	0.0026 U	0.0026 U	52.4 J
G20	DL01	16307	27.0	0.52		13.01			
G20	DL01	16308	28.0	0.44		7.83			
G20	DL01	16309	29.0	0.54		8.63			
G20	DL01	16310	30.0	0.57		11.63			
G20	DL01	16366	30.5	1.16		12.89	0.0030 U	0.0030 U	81.7 J
G20	DL01	16495	32.0	0.74		13.01			
G20	DL01	16496	33.0	1.61		17.5			
G20	DL01	16497	34.0	1.08		21.46			
G20	DL01	16498	35.0	1.09		18.87			
G20	DL01	16500	36.0	0.92		15.3			
G20	DL01	16499	37.0	1.33		18.23			920 R
G20	DL02	16316	27.0	1.43		14.82			
G20	DL02	16317	28.0	0.69		24.91			
G20	DL02	16318	29.0	0.57		9.86			
G20	DL02	16319	30.0	1.5		14.26			
G20	DL02	16373	31.0	0.6		5.58	0.0029 U	0.0029 U	659 J
G20	DL03	16320	27.0	0.71		18.14			
G20	DL03	16321	28.0	0.54		13.07			
G20	DL03	16322	29.0	0.78		20.74			

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (ft.)	Tp-212 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	NI (mg/kg)
G20	DL03	16323	30.0	0.95		15.63			
G20	DL03	16374	31.0	0.93		12.48	0.0029 U	0.0029 U	1150 J
G20	DL03	16464	32.0	0.96		8.92			
G20	DL03	16465	33.0	0.97		16.61			
G20	DL03	16466	34.0	1.18		25.21			
G20	DL03	16467	35.0	0.74		21.2			
G20	DL03	16468	36.0	0.91		14.14			
G20	DL03	16469	37.0	0.64		12.51			
G20	DL03	16470	38.0	1.09		10.7			
G20	DL03	16494	39.0	1.46		15.94	0.097 U	0.097 U	2240 J
G20	DL03	16511	39.5	0.99		13.51			
G20	DL04	16328	27.0	0.7		12.6			
G20	DL04	16329	28.0	1.1		15.07			
G20	DL04	16330	29.0	1.17		12.68			
G20	DL04	16331	30.0	1.01		9.09			
G20	DL04	16375	31.0	1.5		26.5	0.0027 U	0.0027 U	1420 J
G20	DL04	16417	32.0	0.99		77.02			
G20	DL04	16418	33.0	0.81		46.76			
G20	DL04	16421	34.0	0.78		29.26	0.104 U	0.104 U	
G20	DL04	16424	35.0	0.82		23.02			
G20	DL04	16429	36.0	0.58		23.39			
G20	DL04	16430	37.0	0.76		34.28			
G20	DL04	16442	38.0	0.66		16.96			
G20	DL04	16443	39.0	0.61		15.22			
G20	DL04	16446	40.0	0.7		25.68	0.098 U	0.098 U	1500 J
G20	DL04	16501	41.0	0.78		40.03			
G20	DL04	16502	42.0	1.23		29.73			
G20	DL04	16503	43.0	0.75		91.81			
G20	DL04	16506	44.0	1.01		26.96			
G20	DL04	16509	45.0	0.96		16.41			
G20	DL04	16510	46.0	1.61		13.15			
G20	DL04	16532	47.0	1.77		33.23	0.091 U	0.091 U	
G20	DL04	16553	48.0	1.33		34.26			
G20	DL04	16563	49.0	2.29		61.69			
G20	DL04	16569	50.0	1.07		10.21			
G20	DL04	16577	51.0	0.82		8.69			
G20	DL04	16591	52.0	0.63	15.5	14.1	0.0026 U	0.0026 UJ	688
G20	DL05	16324	27.0	0.74		22.36			
G20	DL05	16325	28.0	1.08		16.03			
G20	DL05	16326	29.0	1.31		24.18			
G20	DL05	16327	30.0	1.38		14.49			
G20	DL05	16376	31.0	1.2		14.44	0.0029 U	0.0029 U	415 J
G20	DL05	16454	32.0	1.78		15.74			
G20	DL05	16455	33.0	1.6		10.87 J			
G20	DL05	16456	34.0	1.72		11.95			
G20	DL05	16457	35.0	1.83		19.35			
G20	DL05	16458	36.0	1.35		13.7			
G20	DL05	16476	37.0	1.15		16.45	0.0028 U	0.0028 UJ	346
G20	DL06	16332	27.0	0.8		13.01			
G20	DL06	16333	28.0	0.69		16.02			
G20	DL06	16334	29.0	1.09		21.58			
G20	DL06	16335	30.0	0.69		24.64			

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	TR-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G20	DL06	16372	31.0	0.6		14.79	0.0026 U	0.0026 U	1220 J
G20	DL06	16486	32.0	0.57		14.14			
G20	DL06	16487	33.0	0.49		10.8			
G20	DL06	16488	34.0	1.2		15.29			
G20	DL06	16489	35.0	1.02		17.81			
G20	DL06	16490	36.0	0.98		12.46			
G20	DL06	16491	37.0	0.78		39.45			
G20	DL06	16492	38.0	1.13		22.39			1320 R
G20	DL07	16345	25.0	0.51		22.09			
G20	DL07	16346	26.0	0.42		19.8			
G20	DL07	16352	27.0	0.53		24.04			
G20	DL07	16353	28.0	0.22		20.62			
G20	DL07	16354	29.0	0.25		11.87			
G20	DL07	16355	30.0	0.31		12			
G20	DL07	16364	31.5	0.344	18.7	16.7	0.0026 UJ	0.0026 UJ	22.6 J
G20	DL07	16695	32.0	0.31		11.28			
G20	DL07	16696	33.0	0.26		11.52			
G20	DL07	16697	34.0	0.29		17.11			
G20	DL07	16698	35.0	0.24		9.88			
G20	DL07	16703	36.0	0.22		9.57			
G20	DL07	16704	37.0	0.29		17.6			
G20	DL07	16705	38.0	0.33		13.9			
G20	DL07	16706	39.0	0.43		11.27			
G20	DL07	16707	40.0	0.27		9.18			
G20	DL07	16716	41.0	0.26		18.57			
G20	DL07	16717	42.0	0.39		18.53			
G20	DL07	16718	43.0	0.31		10.5			
G20	DL07	16721	44.0	0.8		10.13			
G20	DL07	16722	45.0	2.38		24.37			
G20	DL07	16731	46.0	0.76		26.4			
G20	DL07	16732	47.0	0.54		14.95			
G20	DL07	16743	48.0	0.75		15.95			
G20	DL07	16744	49.0	0.57		< 4.65			
G20	DL07	16748	50.0	1.12		8.3			
G20	DL07	16762	51.0	0.64	8.5	8.25	0.0032 U	0.0011 J	70 R
G20	DL08	16408	27.0	1.06		9.2			
G20	DL08	16409	28.0	0.54		6.29			
G20	DL08	16410	29.0	0.77		4.79			
G20	DL08	16411	30.0	0.4		< 3.95			
G20	DL08	16433	31.0	0.59		4.96	0.100 U	0.100 U	
G20	DL08	16447	32.0	1.39		46.1			
G20	DL08	16448	33.0	0.9		12.73			
G20	DL08	16449	34.0	0.87		< 5.54			
G20	DL08	16450	35.0	0.82		< 4.34			
G20	DL08	16451	36.0	0.98		15.14			
G20	DL08	16452	37.0	0.96		8.89			
G20	DL08	16453	38.0	0.57		3.8			
G20	DL08	16512	39.0	1.04		4.64			
G20	DL08	16513	40.0	0.72		12.26			
G20	DL08	16514	41.0	0.71		11.5			
G20	DL08	16515	42.0	1.19		24.08			
G20	DL08	16521	43.0	1.63		35.1			

**Cell 9-Table 5
 Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G20	DL08	16522	44.0	2.23		16.84			
G20	DL08	16523	45.0	2.91		18.26			
G20	DL08	16524	46.0	1.84		14.3			116 R
G20	DL09	16384	26.0	0.98		17.69			
G20	DL09	16385	27.0	0.46		17.15			
G20	DL09	16386	28.0	0.65		19.1			
G20	DL09	16387	29.0	0.52		17.41			
G20	DL09	16388	30.0	0.43		16.49			
G20	DL09	16426	31.0	0.58		20.13	0.0026 U	0.0026 UJ	182 J
G20	DL09	16617	31.5	0.53		21.5			
G20	DL09	16618	32.0	0.48		12.72			
G20	DL09	16628	33.0	0.43		17.99			
G20	DL09	16633	34.0	0.42		12.45			
G20	DL09	16634	35.0	0.45		11.93			
G20	DL09	16635	36.0	0.4		9.71			
G20	DL09	16636	37.0	0.3		11.32			
G20	DL09	16646	38.0	0.34		11.85			
G20	DL09	16647	39.0	0.61		19.87			
G20	DL09	16648	40.0	0.49		10.34			
G20	DL09	16649	41.0	0.55		22.91			
G20	DL09	16650	42.0	0.52		34.48			
G20	DL09	16651	43.0	0.42		28.56			
G20	DL09	16652	44.0	0.57		45.4			
G20	DL09	16653	45.0	0.63		40.03			
G20	DL09	16654	46.0	0.92		29.3			
G20	DL09	16655	47.0	2.43		29.43			
G20	DL09	16666	48.0	0.65		16.99			
G20	DL09	16667	49.0	0.94		7.37			
G20	DL09	16668	50.0	1.43		8.13			
G20	DL09	16688	51.0	1.22	16.4	15.1	0.00084 J	0.011	49.5 J
G20	DL10	17231	53.0	0.61	9.59	8.16	0.0026 U	0.0026 U	588
G21	DL01	16356	27.0	0.147	10.9	8.53			
G21	DL01	16357	28.0	0.22		14.76			
G21	DL01	16358	29.0	0.23		< 4.15			
G21	DL01	16359	30.0	0.22		4.15			
G21	DL01	16378	31.0	0.095 J	4.59	3.47	0.0030 U	0.0030 U	60.3 J
G21	DL02	16397	28.0	0.87	5.18	4.34			
G21	DL02	16398	29.0	0.92		5.03			
G21	DL02	16399	30.0	0.83		4.58			
G21	DL02	16438	31.0	0.69		7.45	0.0026 U	0.0026 UJ	234 J
G21	DL02	16619	32.0	0.65		5.87			
G21	DL02	16620	33.0	1.84		13.14			
G21	DL02	16621	34.0	0.81		10.71			
G21	DL02	16622	35.0	0.61		< 4.30			
G21	DL02	16626	36.0	0.53		5.81			
G21	DL02	16627	37.0	0.93		< 5.06			
G21	DL02	16640	38.0	0.59		3.44			
G21	DL02	16641	39.0	0.58		7.74			
G21	DL02	16642	40.0	0.35		3.88			
G21	DL02	16643	41.0	0.65		4.8			
G21	DL02	16644	42.0	1.08		12.55			
G21	DL02	16645	43.0	0.49		20.9			

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G21	DL02	16664	44.0	0.76		10.02			
G21	DL02	16665	45.0	0.81		5.83			
G21	DL02	16674	46.0	0.89		6.61			
G21	DL02	16675	47.0	1.49		32.31			
G21	DL02	16681	48.0	0.84		7.48			
G21	DL02	16682	49.0	0.95		8.69			
G21	DL02	16687	50.0	1.08		10.55			309 R
G21	DL03	16404	27.0	1.05		6.71			
G21	DL03	16405	28.0	1.28		19.5			
G21	DL03	16406	29.0	0.78		6.96			
G21	DL03	16407	30.0	0.54		11.38			705 J
G21	DL03	16432	31.0	1.37		18.08	0.098 U	0.098 U	
G21	DL03	16479	32.0	1.19		12.93			
G21	DL03	16480	33.0	1.84		23.05			
G21	DL03	16481	34.0	1.5	20.8	16.9			
G21	DL03	16482	35.0	0.98		16.72			
G21	DL03	16483	36.0	1.23		13.56			
G21	DL03	16484	37.0	1.19		12.75			
G21	DL03	16485	38.0	0.85		10.3			
G21	DL03	16493	39.0	1.63		9.28	0.107 U	0.107 U	
G21	DL03	16526	40.0	2.15		17.19			
G21	DL03	16527	41.0	1.32		8.58			
G21	DL03	16529	42.0	1.65		24.04			
G21	DL03	16530	43.0	1.23		15.47			
G21	DL03	16531	44.0	0.9		5.16			
G21	DL03	16556	45.0	2.04	14.6	12.8	0.0029 U	0.0029 UJ	494
G21	DL03	16596	46.0	1.62		24.89			
G21	DL03	16597	47.0	1		16.28			
G21	DL03	16600	48.0	2.41		19.7			
G21	DL03	16604	49.0	1.42		15.34			227 R
G21	DL04	16561	27.0	0.88		6.32 J			
G21	DL04	16562	28.0	0.73		9.62			
G21	DL04	16564	29.0	0.96		9.71			
G21	DL04	16565	30.0	1.17		< 5.28			110
G21	DL04	16566	31.0	1.5		< 4.94			
G21	DL04	16570	32.0	0.74		4.05			
G21	DL04	16571	33.0	0.57		< 3.35			
G21	DL04	16572	34.0	0.59		4.19			
G21	DL04	16573	35.0	0.73		6.49 J			
G21	DL04	16574	36.0	0.9		12.74			
G21	DL04	16575	37.0	0.65		< 3.38			
G21	DL04	16576	38.0	1.51		< 4.79			
G21	DL04	16579	39.0	0.9		8.57			
G21	DL04	16580	40.0	0.97		5			
G21	DL04	16583	41.0	1.03		9.97			
G21	DL04	16584	42.0	0.79		8.71			
G21	DL04	16585	43.0	1.13		22.94			
G21	DL04	16586	44.0	1.15		13.49			
G21	DL04	16587	45.0	1.38		22.24			
G21	DL04	16588	46.0	2.14		26.23			
G21	DL04	16589	47.0	1.04		7.21			
G21	DL04	16590	48.0	0.89		11.34			

**Cell 9-Table 5
 Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Dens (pcf)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G21	DL04	16592	49.0	0.75		10.23			268 R
G21	DL05	17225	30.0	0.386	6.16	4.76	0.0026 U	0.0026 UJ	250 J
G21	DL05	17235	35.0	0.354	4.63	3.43	0.0026 U	0.0026 UJ	129
G21	DL06	17226	30.0	0.43	6.80	5.13	0.0026 U	0.0026 UJ	147 J
G21	DL06	17236	48.0	0.60	5.09	4.19	0.0026 U	0.0026 UJ	136
G21	DL07	17228	30.0	1.06		13.16	0.0027 U	0.0027 UJ	700 J
G21	DL08	17224	35.0	1.39	12	9.73	0.0027 U	0.0027 UJ	1620 J
H20	DL01	16343	24.0	< 0.04		12.5			
H20	DL01	16344	25.0	0.25		8.96			
H20	DL01	16347	26.0	0.27		13.07			
H20	DL01	16348	27.0	0.25		11.03			
H20	DL01	16349	28.0	0.32		12.08			
H20	DL01	16350	29.0	0.15		5.67			
H20	DL01	16351	30.0	0.25		5.33			
H20	DL01	16365	31.0	0.242	10.5	9.3	0.0030 U	0.0030 U	39.6 J
H20	DL02	16393	27.0	1.18		27.8			
H20	DL02	16394	28.0	0.7		24.25			
H20	DL02	16395	29.0	1.13		24.33			
H20	DL02	16396	30.0	0.51		6.26			69.6 J
H20	DL02	16427	31.0	1.01		17.79	0.101 U	0.101 U	
H20	DL02	16537	31.5	0.8		18.02			
H20	DL02	16538	32.0	0.91		7.97			
H20	DL02	16539	33.0	0.75		9.17			
H20	DL02	16540	34.0	0.7		9.32			
H20	DL02	16541	35.0	0.59		7.51			
H20	DL02	16542	36.0	0.86		6.36			
H20	DL02	16543	37.0	1.05		10.27			
H20	DL02	16549	38.0	1.19		10.55			
H20	DL02	16550	39.0	0.8		13.46			
H20	DL02	16551	40.0	0.5		9.08			
H20	DL02	16554	41.0	0.84		8.07			
H20	DL02	16557	42.0	0.79		11.05			
H20	DL02	16558	43.0	0.83		9.76			
H20	DL02	16677	44.0	0.69		8.02			
H20	DL02	16678	45.0	1.06		10.66			
H20	DL02	16679	46.0	1.65		15.34			123 J
H20	DL03	17776	28.0	0.58		24.64			
H20	DL03	17777	29.0	0.36		23.24			97.3
H20	DL03	17778	30.0	0.59		8.99			
H20	DL03	17779	31.0	0.36		25.43			67.1
H20	DL03	17780	32.0	0.53		19.92			
H20	DL03	17781	33.0	0.58		23.75			145
H20	DL03	17782	34.0	0.54		29.45			
H20	DL03	17783	35.0	0.46		22.63			67.4
H20	DL03	17784	36.0	0.45		14.67			
H20	DL03	17785	37.0	0.32		12.36			109
H20	DL03	17786	38.0	0.33 J		10.81			
H20	DL03	17787	39.0	< 0.07		12.97			156
H20	DL03	17788	40.0	0.33		13.79			
H20	DL03	17789	41.0	0.28		6.78			61.9
H20	DL03	17790	42.0	0.33		8.66			
H20	DL03	17791	43.0	0.47		11.1			97.7

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	115-232 (pCi/g)	115-234 (pCi/g)	115-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
H21	DL01	16311	26.0	1.55		15.87			
H21	DL01	16312	27.0	0.72		6.99			
H21	DL01	16313	28.0	1.55		11.88			
H21	DL01	16314	29.0	1.97		9.29			
H21	DL01	16315	30.0	0.79		9.17 J			
H21	DL01	16380	31.0	1.66		10.73			
H21	DL01	16379	32.0	3.02	12.1	9.93	0.0029 U	0.0029 U	14.3 J
H21	DL02	16400	27.0	0.23		23.18			
H21	DL02	16401	28.0	0.17		15.83			
H21	DL02	16402	29.0	< 0.02		14.97			
H21	DL02	16403	30.0	0.32		12.6			
H21	DL02	16437	31.0	0.438	21.9	20	0.0027 U	0.0027 UJ	105 J
H21	DL03	17006	27.0	1.64		11.27			
H21	DL03	17007	28.0	1.1		6.21			
H21	DL03	17008	29.0	1.87		15.09			
H21	DL03	17009	30.0	0.61		9.25			
H21	DL03	17026	31.0	1.14	12.9	10.7	0.0026 U	0.0026 U	5.8 J
H21	DL04	17033	25.0	0.18		11.79			
H21	DL04	17034	26.0	0.18		6.23			
H21	DL04	17035	27.0	0.17		9.22			
H21	DL04	17038	28.0	0.16		8.82			
H21	DL04	17039	29.0	0.25		5.19			
H21	DL04	17040	30.0	0.389	11.6	9.61	0.0027 U	0.0027 U	11.2

**Cell 9-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

R - Validation qualifier used to indicate that the result is considered unusable.
U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 9-Figure 6 for boring locations.
DL sample is analyzed on Site for radionuclides (TH-232 and U-238) using the gamma spectroscopy system.
DL sample is analyzed for volatile organic compounds (TCE and PCE) using solid phase microextraction and capillary gas chromatography by Stone Environmental Inc.
SP sample result is **bold** and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.
Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.
Blank cell indicates analysis was not performed.

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C19	DL01	17183	4.0	< 0.12		< 5.56			
C19	DL01	17184	5.0	0.67		< 3.93			
C19	DL01	17185	6.0	0.98		< 5.23			
C19	DL01	17195	7.0	1.49		9.33 J			
C19	DL01	17196	8.0	0.57		5.58 J			
C19	DL01	17197	9.0	0.73		7.03 J			
C19	DL01	17208	10.0	0.36		< 3.23			
C19	DL01	17209	11.0	0.23		< 3.42			
C19	DL01	17210	12.0	0.26		5.46 J			
C19	DL01	17211	13.0	0.30		< 2.94			
C19	DL01	17214	14.0	0.31		< 3.09			
C19	DL01	17215	15.0	0.33		< 3.09			
C19	DL01	17217	16.0	0.22		< 2.46			
C19	DL01	17218	17.0	0.22		< 3.06			
C19	DL01	17220	18.0	0.232	0.88	0.86	0.0026 U	0.0026 U	14.7
C19	DL01	17370	19.0	0.24 J		0.72 J			
C19	DL01	17371	20.0	0.18		1.57			
C19	DL01	17372	21.0	0.26 J		1.17			
C19	DL01	17373	22.0	0.31		0.70 J			
C19	DL01	17374	23.0	0.24 J		< 0.36			
C19	DL01	17375	24.0	0.27		0.37 J			
C19	DL01	17376	25.0	0.20 J		0.48 J			
C19	DL01	17377	26.0	0.38		0.85 J			
C19	DL01	17378	27.0	0.16 J		< 0.37			
C19	DL01	17379	28.0	0.25 J		1.43 J			
C19	DL01	17380	29.0	0.21 J		0.96			
C19	DL01	17381	30.0	0.166	0.160	0.153	0.0026 U	0.0026 U	6.8
C19	DL02	17297	5.0	1.08		2.64			
C19	DL02	17298	6.0	0.83		1.14 J			
C19	DL02	17299	7.0	0.62		1.50			
C19	DL02	17300	8.0	1.69		2.76			
C19	DL02	17301	9.0	0.34		1.44			
C19	DL02	17302	10.0	< 0.05		0.99 J			
C19	DL02	17303	11.0	0.18		< 0.47			
C19	DL02	17304	12.0	0.23		1.02 J			
C19	DL02	17305	13.0	0.31		0.92 J			
C19	DL02	17306	14.0	0.33		0.63 J			
C19	DL02	17307	15.0	< 0.05		0.42 J			
C19	DL02	17308	16.0	< 0.05		1.19			
C19	DL02	17309	17.0	< 0.04		0.73 J			
C19	DL02	17310	18.0	0.22 J		4.07			
C19	DL02	17311	19.0	0.22		0.83 J			
C19	DL02	17312	20.0	0.32		1.49			
C19	DL02	17313	21.0	0.27		0.48 J			
C19	DL02	17314	22.0	0.22		0.66 J			
C19	DL02	17315	23.0	0.23		0.46 J			
C19	DL02	17316	24.0	< 0.06		1.16			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C19	DL02	17317	25.0	0.43		1.47			
C19	DL02	17318	26.0	< 0.07		1.57			
C19	DL02	17319	27.0	0.22		1.11			
C19	DL02	17320	28.0	< 0.08		2.11			
C19	DL02	17321	29.0	0.15		1.17			
C19	DL02	17322	30.0	0.163	0.362	0.391	0.0026 U	0.0026 U	3.2 J
D19	DL03	17083	8.0	0.37		< 3.11			
D19	DL03	17084	9.0	0.31		< 2.93			
D19	DL03	17085	10.0	0.19		< 2.98			
D19	DL03	17086	11.0	0.27		< 2.96			
D19	DL03	17087	12.0	0.20		3.93			
D19	DL03	17088	13.0	0.19		2.86 J			
D19	DL03	17089	14.0	0.29		< 2.83			
D19	DL03	17093	15.0	0.19		< 2.33			
D19	DL03	17094	16.0	0.20		< 2.58			
D19	DL03	17095	17.0	0.24		< 2.10			
D19	DL03	17096	18.0	0.17		< 2.97			
D19	DL03	17097	19.0	0.22		2.28 J			
D19	DL03	17098	20.0	0.18		< 2.71			
D19	DL03	17100	21.0	0.17		4.13 J			
D19	DL03	17101	22.0	0.18		< 2.83			
D19	DL03	17102	23.0	0.22		< 2.89			
D19	DL03	17109	24.0	0.23		3.21 J			
D19	DL03	17110	25.0	0.22		< 2.63			
D19	DL03	17111	26.0	0.29		< 3.08			
D19	DL03	17122	27.0	0.17		< 2.49			
D19	DL03	17123	28.0	0.15		< 2.19			
D19	DL03	17128	29.0	0.16		7.89			
D19	DL03	17131	30.0	0.101	1.99	1.86	0.0026 U	0.0026 U	19.2
D19	DL04	17331	13.0	0.32		1.03 J			
D19	DL04	17332	14.0	0.24		1.50 J			
D19	DL04	17333	15.0	0.34		< 0.55			
D19	DL04	17334	16.0	0.23		1.00 J			
D19	DL04	17335	17.0	0.30		< 0.57			
D19	DL04	17336	18.0	< 0.07		0.50 J			
D19	DL04	17337	19.0	< 0.06		1.95 J			
D19	DL04	17338	20.0	0.28		1.28			
D19	DL04	17339	21.0	< 0.06		0.83 J			
D19	DL04	17340	22.0	< 0.05		1.02			
D19	DL04	17341	23.0	0.25		1.64			
D19	DL04	17342	24.0	0.23		0.77 J			
D19	DL04	17343	25.0	< 0.07		2.49			
D19	DL04	17344	26.0	0.30		0.63 J			
D19	DL04	17345	27.0	0.27		0.95 J			
D19	DL04	17346	28.0	0.28		1.85			
D19	DL04	17347	29.0	< 0.09		1.34 J			
D19	DL04	17348	30.0	0.106	1.37	1.35	0.0027 U	0.0027 U	446

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Site/Cell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E19	DL05	17440	7.0	0.67 J		1.35 J			
E19	DL05	17441	8.0	0.32 J		1.03			
E19	DL05	17442	9.0	0.21		0.67 J			
E19	DL05	17443	10.0	0.32		0.88			
E19	DL05	17444	11.0	0.22		1.50			
E19	DL05	17445	12.0	0.56		1.70 J			
E19	DL05	17446	13.0	0.37 J		10.00			
E19	DL05	17447	14.0	0.27 J		5.90			
E19	DL05	17448	15.0	0.30		17.68			
E19	DL05	17449	16.0	0.31		10.19			
E19	DL05	17450	17.0	0.34 J		10.77			
E19	DL05	17451	18.0	0.28 J		10.67			
E19	DL05	17452	19.0	< 0.03		13.06			
E19	DL05	17453	20.0	0.21		13.31			
E19	DL05	17454	21.0	0.33		16.72			
E19	DL05	17455	22.0	< 0.08		8.10			
E19	DL05	17456	23.0	0.03 UJ		< 1.15			
E19	DL05	17457	24.0	0.05 UJ		4.91			
E19	DL05	17458	25.0	0.24		7.58			
E19	DL05	17459	26.0	0.11		5.94			
E19	DL05	17460	27.0	< 0.03		8.64			
E19	DL05	17461	28.0	0.03 UJ		6.74			
E19	DL05	17462	29.0	0.23 J		5.07			
E19	DL05	17463	30.0	0.124	4.0	3.41	0.0026 U	0.0026 U	7.1
E19	DL06	17417	9.0	0.49 J		1.45 J			
E19	DL06	17418	11.0	0.61		2.45			
E19	DL06	17419	12.0	0.23		2.26			
E19	DL06	17420	13.0	0.27		3.58			
E19	DL06	17423	14.0	0.26		3.61			
E19	DL06	17424	15.0	0.14		2.61			
E19	DL06	17421	16.0	0.23		2.82			
E19	DL06	17422	17.0	0.09 UJ		2.48			
E19	DL06	17425	18.0	0.17		1.72			
E19	DL06	17426	19.0	0.18 J		2.36			
E19	DL06	17427	20.0	0.16		3.42			
E19	DL06	17428	21.0	0.16		1.55 J			
E19	DL06	17429	22.0	0.22		1.98			
E19	DL06	17430	23.0	< 0.06		2.31			
E19	DL06	17431	24.0	0.29		3.75			
E19	DL06	17432	25.0	0.32 J		2.01			
E19	DL06	17433	26.0	0.06 UJ		2.49			
E19	DL06	17434	27.0	< 0.03		1.68			
E19	DL06	17435	28.0	0.29		4.40			
E19	DL06	17436	29.0	0.15 J		7.86			
E19	DL06	17437	30.0	0.176	13.9	11.3	0.093 U	0.093 U	
E19	DL06	17464	32.0	0.36		19.49			
E19	DL06	17465	33.0	0.33 J		16.38			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E19	DL06	17480	34.0	0.31 J		14.90			
E19	DL06	17481	35.0	0.28		5.15			
E19	DL06	17482	36.0	0.150	4.72	4.45	0.0026 U	0.0026 U	29.6
F19	DL07	17383	12.0	< 0.04		5.40			
F19	DL07	17384	13.0	0.24 J		2.09			
F19	DL07	17385	14.0	0.47		4.67			
F19	DL07	17386	15.0	0.07 UJ		5.54			
F19	DL07	17387	16.0	0.44		3.00			
F19	DL07	17388	17.0	0.34 J		3.14			
F19	DL07	17389	18.0	0.32		4.68			
F19	DL07	17390	19.0	0.04 UJ		3.83			
F19	DL07	17391	20.0	< 0.07		3.87			
F19	DL07	17392	21.0	0.48 J		2.91			
F19	DL07	17393	22.0	0.35		4.22			
F19	DL07	17394	23.0	0.26 J		7.77			
F19	DL07	17395	24.0	0.29		4.73			
F19	DL07	17396	25.0	0.28 J		6.30			
F19	DL07	17397	26.0	0.49		9.23			
F19	DL07	17398	27.0	0.03 UJ		8.20			
F19	DL07	17399	28.0	0.38 J		10.09			
F19	DL07	17400	29.0	0.22 J		6.44			
F19	DL07	17401	30.0	0.147	4.29	3.85	0.0026 U	0.0026 U	10.0
F19	DL08	17402	16.0	0.50		< 1.58			
F19	DL08	17403	17.0	0.32 J		3.05			
F19	DL08	17404	18.0	0.32		< 0.98			
F19	DL08	17405	19.0	0.29 J		< 0.46			
F19	DL08	17406	20.0	< 0.05		3.72			
F19	DL08	17407	21.0	0.30 J		4.01			
F19	DL08	17408	22.0	0.25		1.97			
F19	DL08	17409	23.0	0.24		2.11			
F19	DL08	17410	24.0	0.39		3.30			
F19	DL08	17411	25.0	0.25		6.39			
F19	DL08	17412	26.0	0.40		9.57			
F19	DL08	17413	27.0	0.28 J		5.71			
F19	DL08	17414	28.0	0.22 J		4.63			
F19	DL08	17415	29.0	0.15		3.80			
F19	DL08	17416	30.0	0.174	3.77	3.30	0.0026 U	0.0026 U	8.7
G19	DL09	17053	19.0	0.26		11.38			
G19	DL09	17054	20.0	0.28		6.76			
G19	DL09	17055	21.0	0.19		4.88			
G19	DL09	17056	22.0	0.24		3.21			
G19	DL09	17057	23.0	0.21		7.83			
G19	DL09	17068	24.0	0.25		3.45			
G19	DL09	17069	25.0	0.26		13.59			
G19	DL09	17070	26.0	0.21		4.38			
G19	DL09	17071	27.0	0.32		21.89			
G19	DL09	17072	28.0	0.26		10.59			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Pb-232 (pCi/g)	U-235 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G19	DL09	17074	29.0	0.33		9.52			
G19	DL09	17075	30.0	0.247	11.9	11.5	0.0031 U	0.0031 U	20.9
G19	DL10	17004	18.0	0.31		7.90			
G19	DL10	17005	19.0	0.20		< 3.48			
G19	DL10	17010	20.0	0.22		3.47			
G19	DL10	17011	21.0	0.31		8.63			
G19	DL10	17012	22.0	0.30		8.91			
G19	DL10	17018	23.0	0.31		4.33			
G19	DL10	17019	24.0	0.23		3.65			
G19	DL10	17020	25.0	0.16		9.75			
G19	DL10	17021	26.0	< 0.05		9.05			
G19	DL10	17022	27.0	0.23		6.45			
G19	DL10	17023	28.0	0.28		5.98			
G19	DL10	17024	29.0	0.26		5.64			
G19	DL10	17025	30.0	0.198	3.66	3.55	0.0025 U	0.0025 U	11.0 J
H19	DL11	17029	18.0	0.25		4.80			
H19	DL11	17030	19.0	0.24		< 3.55			
H19	DL11	17031	20.0	0.30		4.11 J			
H19	DL11	17032	21.0	0.19		2.76 J			
H19	DL11	17036	22.0	0.19		4.33 J			
H19	DL11	17037	23.0	0.22		< 2.69			
H19	DL11	17041	24.0	0.22		3.23			
H19	DL11	17042	25.0	0.17		< 2.88			
H19	DL11	17043	26.0	0.18		2.35			
H19	DL11	17060	27.0	0.17		< 2.99			
H19	DL11	17061	28.0	0.17		3.90 J			
H19	DL11	17062	29.0	< 0.06		< 3.74			
H19	DL11	17063	30.0	0.086 J	1.84	1.55	0.0029 U	0.00037 J	5.9
H19	DL12	17058	18.0	0.35		< 3.08			
H19	DL12	17059	19.0	0.34		< 2.66			
H19	DL12	17064	20.0	0.38		< 3.08			
H19	DL12	17065	21.0	0.38		< 3.18			
H19	DL12	17066	22.0	0.05 UJ		< 3.30			
H19	DL12	17067	23.0	0.31		< 3.03			
H19	DL12	17073	24.0	0.47		6.56 J			
H19	DL12	17076	25.0	0.60		< 3.91			
H19	DL12	17077	26.0	0.39		7.03			
H19	DL12	17078	27.0	0.30		3.83			
H19	DL12	17079	28.0	0.29		4.74			
H19	DL12	17080	29.0	0.40		4.51			
H19	DL12	17081	30.0	0.363	6.37	6.03	0.0029 U	0.0029 U	11.3
C20	DL13	17176	5.0	0.43		3.69 J			
C20	DL13	17177	6.0	0.51		< 4.41			
C20	DL13	17178	7.0	0.95		5.78 J			
C20	DL13	17179	8.0	0.52		< 4.33			
C20	DL13	17180	9.0	0.44		< 3.20			
C20	DL13	17506	9.0	0.22		0.66 J			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C20	DL13	17507	10.0	0.42		1.68			
C20	DL13	17508	11.0	0.46		1.42			
C20	DL13	17509	12.0	0.30		< 0.28			
C20	DL13	17510	13.0	0.24		0.52 J			
C20	DL13	17511	14.0	0.28		0.99 J			
C20	DL13	17512	15.0	0.25		0.76 J			
C20	DL13	17513	16.0	0.26		0.82 J			
C20	DL13	17514	17.0	0.46		< 0.53			
C20	DL13	17515	18.0	0.13		1.91			
C20	DL13	17516	19.0	0.15		0.33 J			
C20	DL13	17517	20.0	0.27		< 0.35			
C20	DL13	17518	21.0	0.29		< 0.41			
C20	DL13	17519	22.0	0.19		0.89 J			
C20	DL13	17520	23.0	0.29		1.14 J			
C20	DL13	17521	24.0	0.18		1.34 J			
C20	DL13	17522	25.0	0.21		0.70 J			
C20	DL13	17523	26.0	0.30		0.93 J			
C20	DL13	17524	27.0	0.39		0.82 J			
C20	DL13	17525	28.0	0.36		2.06			
C20	DL13	17526	29.0	0.18		1.16 J			
C20	DL13	17527	30.0	0.136	0.312	0.330	0.0026 U	0.0026 U	2.3 J
C20	DL14	17528	6.0	1.07		3.17			
C20	DL14	17529	7.0	0.64 J		0.97 J			
C20	DL14	17530	8.0	0.30		0.82 J			
C20	DL14	17531	9.0	0.28		1.07			
C20	DL14	17532	10.0	0.52		1.37 J			
C20	DL14	17533	11.0	0.34 J		< 0.47			
C20	DL14	17534	12.0	0.27		1.57			
C20	DL14	17535	13.0	0.07 UJ		1.12 J			
C20	DL14	17538	14.0	0.33		1.65			
C20	DL14	17539	15.0	0.29		1.62			
C20	DL14	17540	16.0	0.11 UJ		0.74 J			
C20	DL14	17541	17.0	0.28		< 0.52			
C20	DL14	17542	18.0	0.21		0.49 J			
C20	DL14	17543	19.0	0.04 UJ		0.72 J			
C20	DL14	17544	20.0	0.14		0.78 J			
C20	DL14	17545	21.0	0.16		0.31 J			
C20	DL14	17546	22.0	0.16		0.72 J			
C20	DL14	17547	23.0	0.25 J		0.41 J			
C20	DL14	17548	24.0	0.31		1.08			
C20	DL14	17549	25.0	0.30 J		1.09 J			
C20	DL14	17550	26.0	0.28		< 0.45			
C20	DL14	17551	27.0	0.22 J		1.17			
C20	DL14	17552	28.0	0.23		1.14 J			
C20	DL14	17553	29.0	0.23 J		1.27 J			
C20	DL14	17554	30.0	0.143	0.122	0.123	0.0026 U	0.0026 U	3.0 J
D20	DL15	17349	11.0	0.62		< 1.13			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
D20	DL15	17350	12.0	0.40		3.26			
D20	DL15	17351	14.0	0.28		1.43			
D20	DL15	17352	16.0	0.29		1.62 J			
D20	DL15	17353	17.0	0.22		0.93 J			
D20	DL15	17354	18.0	0.21		1.18 J			
D20	DL15	17355	19.0	0.23		1.80			
D20	DL15	17356	20.0	< 0.06		2.57			
D20	DL15	17357	21.0	0.20		1.71			
D20	DL15	17358	22.0	0.22		< 0.58			
D20	DL15	17359	23.0	0.26		2.92 J			
D20	DL15	17360	24.0	0.21		< 0.46			
D20	DL15	17361	25.0	0.20 J		1.64			
D20	DL15	17362	26.0	0.24		2.61			
D20	DL15	17363	27.0	0.43		1.41			
D20	DL15	17364	28.0	0.26		1.66			
D20	DL15	17365	29.0	0.19		1.40			
D20	DL15	17366	30.0	0.169	1.02	1.04	0.0027 U	0.0027 U	41.9
D20	DL16	17198	17.0	0.32		3.72 J			
D20	DL16	17199	18.0	0.36		3.16 UJ			
D20	DL16	17200	19.0	0.31		3.24 J			
D20	DL16	17201	20.0	0.34		< 2.51			
D20	DL16	17202	21.0	0.23		3.89			
D20	DL16	17203	22.0	0.22		2.99			
D20	DL16	17206	23.0	0.25		< 3.06			
D20	DL16	17207	24.0	0.23		< 2.63			
D20	DL16	17212	25.0	0.24		3.43 UJ			
D20	DL16	17213	26.0	0.21		5.96			
D20	DL16	17216	27.0	0.22		4.88 J			
D20	DL16	17219	28.0	0.26		4.41 J			
D20	DL16	17221	28.5	0.295	4.08	3.65	0.0026 U	0.0026 U	488
E20	DL17	17161	17.0	0.24		< 2.94			
E20	DL17	17162	18.0	0.22		4.53			
E20	DL17	17163	19.0	0.13		4.65			
E20	DL17	17164	20.0	0.21		7.65			
E20	DL17	17171	21.0	0.29		4.09			
E20	DL17	17172	22.0	0.19		3.87			
E20	DL17	17173	23.0	0.18		4.21 J			
E20	DL17	17174	24.0	< 0.03		4.19			
E20	DL17	17181	25.0	< 0.03		3.83			
E20	DL17	17182	26.0	0.24		5.22 J			
E20	DL17	17222	26.5	0.103	4.14	3.66	0.0026 U	0.0026 U	738
E20	DL17	17466	27.0	0.54 J		2.72			
E20	DL17	17467	28.0	0.71 J		4.48			58.2
E20	DL17	17468	29.0	0.64		3.91			
E20	DL17	17469	30.0	0.47 J		3.00			123
E20	DL17	17470	31.0	0.41 J		4.14			
E20	DL17	17471	32.0	0.31 J		2.95			241

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Pb-212 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E20	DL17	17472	33.0	0.30 J		3.88			
E20	DL17	17473	34.0	0.35		3.76			450
E20	DL17	17474	35.0	0.26 J		3.40			
E20	DL17	17475	36.0	0.18 J		8.74			754
E20	DL17	17476	37.0	0.21 J		11.93			
E20	DL17	17477	38.0	0.32 J		14.70			102
E20	DL17	17478	39.0	0.18		5.34			
E20	DL17	17479	40.0	0.195	5.60	5.15	0.0026 U	0.0026 U	291
E20	DL18	17283	17.0	0.26		22.63			
E20	DL18	17284	18.0	< 0.05		11.62			
E20	DL18	17285	19.0	0.21		2.03 J			
E20	DL18	17286	20.0	0.22		4.10 J			
E20	DL18	17287	21.0	0.22		11.79			
E20	DL18	17288	22.0	0.24		12.40 J			
E20	DL18	17289	23.0	< 0.02		22.28			
E20	DL18	17290	24.0	0.25		15.67			
E20	DL18	17291	25.0	< 0.06		10.16			
E20	DL18	17292	26.0	< 0.03		9.13			
E20	DL18	17293	27.0	0.34		8.66 J			
E20	DL18	17294	28.0	0.64		206.48			
E20	DL18	17295	29.0	< 0.05		11.23			
E20	DL18	17296	30.0	0.132	6.65	6.06	0.0026 U	0.0026 U	151
F20	DL19	17268	18.0	0.32		7.30			
F20	DL19	17269	19.0	0.23		3.53 J			
F20	DL19	17270	20.0	0.27		1.44 UJ			
F20	DL19	17271	21.0	0.22		8.48			
F20	DL19	17272	22.0	0.21		5.80 J			
F20	DL19	17273	23.0	0.27		7.79			
F20	DL19	17274	24.0	< 0.07		6.10			
F20	DL19	17275	25.0	< 0.04		4.02			
F20	DL19	17276	26.0	0.12		5.35 J			
F20	DL19	17277	27.0	0.18		< 1.07			
F20	DL19	17278	28.0	0.23		6.81 J			
F20	DL19	17279	29.0	0.19		8.57			
F20	DL19	17280	30.0	0.210	5.17	4.47	0.0025 U	0.0025 U	12.9
F20	DL20	17013	24.0	0.21		5.53			
F20	DL20	17014	25.0	0.31		4.77 J			
F20	DL20	17015	26.0	0.22		5.43			
F20	DL20	17016	27.0	0.18		4.34			
F20	DL20	17017	28.0	0.18		3.48			
F20	DL20	17027	29.0	0.24		5.15			
F20	DL20	17028	30.0	0.254	10.8	10.8	0.0029 U	0.0029 U	172 J
G20	DL21	16967	27.0	0.22		9.90			
G20	DL21	16968	28.0	0.37		20.85			
G20	DL21	16969	29.0	< 0.07		5.43			
G20	DL21	16970	30.0	0.295	13.1	12.7	0.0026 U	0.0026 U	318 J
G20	DL22	16987	26.0	0.46		27.38			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Pb-212 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
G20	DL22	16988	27.0	0.63		16.34			
G20	DL22	16989	28.0	0.29		21.77			
G20	DL22	16990	29.0	0.47		21.59			
G20	DL22	16997	30.0	0.278	24.0	21.8	0.0027 U	0.0027 U	3.1 J
H20	DL23	16994	25.0	0.42		9.15			
H20	DL23	16991	26.0	0.45		15.70			
H20	DL23	16992	27.0	0.46		13.50			
H20	DL23	16993	28.0	0.43		28.02			
H20	DL23	16995	29.0	0.21		12.21			
H20	DL23	16996	30.0	0.307	11.3	10.9	0.0026 U	0.0026 U	28.9 J
H20	DL24	16998	25.0	0.32		22.38			
H20	DL24	16999	26.0	0.42		18.11			
H20	DL24	17000	27.0	0.59		22.32			
H20	DL24	17001	28.0	0.31		16.30			
H20	DL24	17002	29.0	0.35		20.11			
H20	DL24	17003	30.0	0.316	15.6	13.7	0.0026 U	0.0026 U	85.8 J
C20	DL25	17555	2.0	1.21		21.51			
C20	DL25	17556	3.0	0.77		7.21			
C20	DL25	17557	4.0	0.81		3.26			
C20	DL25	17558	5.0	1.20 J		< 1.17			
C20	DL25	17559	6.0	1.18		1.35 J			
C20	DL25	17560	7.0	0.72 J		1.51			
C20	DL25	17561	8.0	0.55		< 0.60			
C20	DL25	17562	9.0	0.21		1.46 J			
C20	DL25	17563	10.0	0.48		0.63 J			
C20	DL25	17564	11.0	0.32 J		1.38			
C20	DL25	17565	12.0	0.32		1.21 J			
C20	DL25	17566	13.0	0.28 J		0.89 J			
C20	DL25	17567	14.0	0.26		1.36			
C20	DL25	17568	15.0	0.33 J		1.43			
C20	DL25	17569	16.0	0.35		< 0.27			
C20	DL25	17570	17.0	0.26 J		1.02			
C20	DL25	17571	18.0	0.17		0.28 J			
C20	DL25	17572	19.0	0.25		0.88 J			
C20	DL25	17573	20.0	0.23		1.03 J			
C20	DL25	17574	21.0	0.25 J		0.64 J			
C20	DL25	17575	22.0	0.15		0.92			
C20	DL25	17576	23.0	0.22		1.06 J			
C20	DL25	17577	24.0	0.22		1.13 J			
C20	DL25	17578	25.0	0.27 J		< 0.37			
C20	DL25	17579	26.0	< 0.07		2.83			
C20	DL25	17580	27.0	0.27 J		0.64 J			
C20	DL25	17581	28.0	< 0.04		< 0.57			
C20	DL25	17582	29.0	0.23 J		0.47 J			
C20	DL25	17583	30.0	0.082 J	0.190	0.137	0.0026 U	0.0026 U	2.5 J
C20	DL26	17584	7.0	0.79		2.82			
C20	DL26	17585	8.0	0.40		1.86			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
C20	DL26	17586	9.0	0.26		0.60 J			
C20	DL26	17587	10.0	0.46		0.68 J			
C20	DL26	17588	11.0	0.35		0.88 J			
C20	DL26	17589	12.0	0.29		0.91 J			
C20	DL26	17590	13.0	0.19		0.80 J			
C20	DL26	17591	14.0	0.23		1.20 J			
C20	DL26	17592	15.0	0.43		1.02 J			
C20	DL26	17593	16.0	0.36		0.49 J			
C20	DL26	17594	17.0	0.36		2.23			
C20	DL26	17595	18.0	0.23		1.50 J			
C20	DL26	17596	19.0	0.18		0.42 J			
C20	DL26	17597	20.0	0.29		< 0.46			
C20	DL26	17598	21.0	< 0.06		1.35			
C20	DL26	17599	22.0	0.34		0.99 J			
C20	DL26	17600	23.0	0.23		< 1.28			
C20	DL26	17601	24.0	0.36		1.15			
C20	DL26	17602	25.0	0.27		0.57 J			
C20	DL26	17603	26.0	0.19		< 0.36			
C20	DL26	17604	27.0	0.19		< 0.30			
C20	DL26	17605	28.0	0.33		1.21			
C20	DL26	17606	29.0	0.26		0.74 J			
C20	DL26	17607	30.0	0.216	0.142	0.108	0.0026 U	0.0026 U	5.2
C20	DL27	17611	6.0	0.64		3.53			
C20	DL27	17612	7.0	0.65		1.34			
C20	DL27	17613	8.0	0.73		1.24 J			
C20	DL27	17614	9.0	0.30		0.38 J			
C20	DL27	17615	10.0	0.96		2.93			
C20	DL27	17616	11.0	0.33		1.91			
C20	DL27	17617	12.0	0.31		1.01 J			
C20	DL27	17618	13.0	0.30		< 0.47			
C20	DL27	17621	14.0	0.20		0.81 J			
C20	DL27	17622	15.0	0.24		1.23			
C20	DL27	17623	16.0	0.28		< 0.45			
C20	DL27	17624	17.0	0.22		< 0.40			
C20	DL27	17625	18.0	< 0.07		1.18			
C20	DL27	17626	19.0	< 0.03		1.14			
C20	DL27	17628	20.0	0.17		0.97 J			
C20	DL27	17629	21.0	0.23		1.53			
C20	DL27	17630	22.0	0.26		0.75			
C20	DL27	17631	23.0	0.22		0.75 J			
C20	DL27	17632	24.0	< 0.05		0.92 J			
C20	DL27	17633	25.0	0.31		1.28			
C20	DL27	17634	26.0	0.18		0.47 J			
C20	DL27	17635	27.0	0.20		0.98			
C20	DL27	17636	28.0	0.26		0.70 J			
C20	DL27	17637	29.0	0.23		0.92			
C20	DL27	17638	30.0	0.184	0.127	0.145	0.0026 U	0.0026 U	4.1 U

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (ft±f)	Ti-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C20	DL28	17641	8.0	0.38		0.86 J			
C20	DL28	17642	9.0	0.56		1.55			
C20	DL28	17643	10.0	0.22		1.90			
C20	DL28	17644	11.0	0.39		1.20			
C20	DL28	17645	12.0	0.30		0.54 J			
C20	DL28	17646	13.0	< 0.05		2.01			
C20	DL28	17647	14.0	0.24		< 0.31			
C20	DL28	17648	15.0	0.40		1.72			
C20	DL28	17649	16.0	0.30		1.86			
C20	DL28	17650	17.0	< 0.03		1.15			
C20	DL28	17651	18.0	0.25		0.55 J			
C20	DL28	17652	19.0	0.34		1.50			
C20	DL28	17653	20.0	0.25		0.88 J			
C20	DL28	17654	21.0	< 0.03		1.74			
C20	DL28	17655	22.0	< 0.06		< 0.49			
C20	DL28	17658	23.0	0.37		1.10			
C20	DL28	17659	24.0	0.28		0.78 J			
C20	DL28	17660	25.0	< 0.04		1.15 J			
C20	DL28	17661	26.0	0.42		< 0.45			
C20	DL28	17662	27.0	0.42		1.83 J			
C20	DL28	17663	28.0	< 0.04		1.25 J			
C20	DL28	17665	29.0	0.32		0.92 J			
C20	DL28	17666	30.0	0.136	0.156	0.120	0.0025 U	0.0025 U	2.1 J
C21	DL29	17743	3.0	0.98		21.32			
C21	DL29	17744	4.0	0.88 J		1.28 J			
C21	DL29	17745	5.0	< 0.11		1.15 J			
C21	DL29	17746	6.0	0.79		1.41 J			
C21	DL29	17747	7.0	0.86		4.51			
C21	DL29	17748	8.0	0.47		1.21 J			
C21	DL29	17749	9.0	0.58 J		3.13			
C21	DL29	17750	10.0	0.40		1.68 J			
C21	DL29	17751	11.0	0.43		< 0.47			
C21	DL29	17752	12.0	0.32 J		0.64 J			
C21	DL29	17753	13.0	0.41		2.53			
C21	DL29	17754	14.0	0.28		0.60 J			
C21	DL29	17755	15.0	0.07 UJ		1.14			
C21	DL29	17756	16.0	0.25		0.90 J			
C21	DL29	17757	17.0	0.54		2.07			
C21	DL29	17758	18.0	0.23 J		1.79			
C21	DL29	17759	19.0	0.32		0.98			
C21	DL29	17760	20.0	0.19 J		1.05 J			
C21	DL29	17761	21.0	0.20		< 0.39			
C21	DL29	17762	22.0	0.19		1.22 J			
C21	DL29	17763	23.0	0.33 J		0.78 J			
C21	DL29	17764	24.0	0.35		1.11 J			
C21	DL29	17765	25.0	0.23		0.90 J			
C21	DL29	17766	26.0	0.39		1.11 J			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subwell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-235 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C21	DL29	17767	27.0	0.27		0.83 J			
C21	DL29	17768	28.0	0.19		< 0.34			
C21	DL29	17769	29.0	0.24 J		1.15 J			
C21	DL29	17770	30.0	0.110	0.121	0.091 J	0.0025 U	0.0025 U	4.1 U
C21	DL30	17668	9.0	0.53		< 0.52	0.079 U	0.079 U	
C21	DL30	17669	10.0	0.51 J		< 0.78			
C21	DL30	17670	11.0	0.28 J		1.17 J			
C21	DL30	17671	12.0	0.45		0.75 J	0.094 U	0.094 U	
C21	DL30	17672	13.0	0.27 J		1.10 J			
C21	DL30	17673	14.0	0.23 J		0.39 UJ			
C21	DL30	17674	15.0	0.35		1.68 J			
C21	DL30	17675	16.0	0.03 UJ		1.37 J			
C21	DL30	17676	17.0	0.18 J		0.40 J			
C21	DL30	17677	18.0	0.30		1.04 J			
C21	DL30	17678	19.0	0.35 J		0.82 J			
C21	DL30	17679	20.0	0.19 J		0.63 J			
C21	DL30	17680	21.0	0.21		0.82 J			
C21	DL30	17681	22.0	0.24 J		< 0.30			
C21	DL30	17682	23.0	0.04 UJ		1.17 J			
C21	DL30	17683	24.0	0.32		0.89 J			
C21	DL30	17684	25.0	0.21 J		1.33			
C21	DL30	17685	26.0	0.18 J		1.21 J			
C21	DL30	17686	27.0	0.20		1.21			
C21	DL30	17687	28.0	< 0.05		2.06			
C21	DL30	17688	29.0	0.21 J		0.43 J			
C21	DL30	17689	30.0	0.137	0.296	0.250	0.0025 U	0.0025 U	2.3 J
C21	DL31	17714	4.0	0.75		6.50			
C21	DL31	17715	5.0	1.14		1.95 J			
C21	DL31	17716	6.0	1.12 J		3.21			
C21	DL31	17717	7.0	0.50		0.84 J			
C21	DL31	17718	9.0	0.30		1.18 J			
C21	DL31	17719	10.0	0.38 J		0.88 J			
C21	DL31	17720	11.0	0.43 J		1.43 J			
C21	DL31	17721	12.0	0.84		1.63 J			
C21	DL31	17722	13.0	0.34		1.15			
C21	DL31	17723	14.0	0.08 UJ		1.08 J			
C21	DL31	17724	15.0	0.33		1.56			
C21	DL31	17725	16.0	0.30		0.62			
C21	DL31	17726	17.0	0.07 UJ		< 0.43			
C21	DL31	17730	18.0	0.27		1.13 J			
C21	DL31	17731	19.0	0.15		0.62 J			
C21	DL31	17732	20.0	0.25		< 0.31			
C21	DL31	17733	21.0	0.25		1.05 J			
C21	DL31	17734	22.0	0.24		1.10			
C21	DL31	17735	23.0	0.43 J		1.12 J			
C21	DL31	17736	24.0	0.31		1.40 J			
C21	DL31	17737	25.0	0.20 J		0.45 J			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
C21	DL31	17738	26.0	0.25 J		1.19			
C21	DL31	17739	27.0	0.22		0.49 J			
C21	DL31	17740	28.0	0.28 J		1.43 J			
C21	DL31	17741	29.0	0.23		< 0.39			
C21	DL31	17742	30.0	0.153	0.190	0.189	0.0025 U	0.0025 U	3.4 J
C21	DL32	17690	9.0	0.44		1.79			
C21	DL32	17691	10.0	0.23		1.19			
C21	DL32	17692	11.0	0.63 J		1.29 J			
C21	DL32	17693	12.0	0.31 J		1.04 J			
C21	DL32	17694	13.0	0.38 J		1.18 J			
C21	DL32	17695	14.0	0.36		0.83 J			
C21	DL32	17696	15.0	0.55 J		0.91 J			
C21	DL32	17697	16.0	0.36		< 0.35			
C21	DL32	17698	17.0	0.03 UJ		< 0.19			
C21	DL32	17699	18.0	0.09 UJ		0.97 J			
C21	DL32	17700	19.0	0.15		0.72 J			
C21	DL32	17701	20.0	0.23 J		1.34			
C21	DL32	17702	21.0	0.26 J		0.71 J			
C21	DL32	17703	22.0	0.27		2.16 J			
C21	DL32	17704	23.0	0.32 J		1.08			
C21	DL32	17705	24.0	0.34 J		1.08 J			
C21	DL32	17706	25.0	0.17		1.18			
C21	DL32	17707	26.0	0.25 J		0.60 J			
C21	DL32	17708	27.0	0.06 UJ		0.85 J			
C21	DL32	17709	28.0	0.20		< 0.44			
C21	DL32	17710	29.0	0.22 J		0.41 J			
C21	DL32	17711	30.0	0.107	0.176	0.215	0.0025 U	0.0025 U	3.6 J
D21	DL33	17136	17.0	0.21		< 3.36			
D21	DL33	17137	18.0	0.18		5.27			
D21	DL33	17138	19.0	0.15		10.12			
D21	DL33	17139	20.0	0.22		< 3.78			
D21	DL33	17145	21.0	0.18		3.45			
D21	DL33	17146	22.0	0.25		3.50			
D21	DL33	17147	23.0	0.29		< 3.07			
D21	DL33	17148	24.0	0.20		5.15 J			
D21	DL33	17149	25.0	0.16		< 3.03			
D21	DL33	17155	26.0	0.15		3.66			
D21	DL33	17156	27.0	0.17		< 3.11			
D21	DL33	17159	28.0	0.14		3.73			
D21	DL33	17175	29.0	0.183	4.43	4.27	0.0026 U	0.0026 U	2.4 J
E21	DL34	17116	18.0	0.18		< 3.50			
E21	DL34	17117	19.0	0.23		3.52			
E21	DL34	17118	20.0	0.17		4.91			
E21	DL34	17119	21.0	< 0.04		9.87			
E21	DL34	17120	22.0	0.18		4.19			
E21	DL34	17125	23.0	0.17		4.43 J			
E21	DL34	17126	24.0	0.33		< 2.82			

**Cell 9-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E21	DL34	17129	25.0	< 0.02		3.50 J			
E21	DL34	17130	26.0	0.16		3.52			
E21	DL34	17135	27.0	0.18		6.55			
E21	DL34	17140	28.0	0.13		< 2.83			
E21	DL34	17141	29.0	< 0.04		< 2.79			
E21	DL34	17142	30.0	0.156	3.24	3.03	0.0029 UJ	0.0029 U	3.3 J
F21	DL35	17044	24.0	0.32		3.36			
F21	DL35	17045	25.0	0.20		4.95 J			
F21	DL35	17046	26.0	0.18		< 2.14			
F21	DL35	17047	27.0	0.20		7.18			
F21	DL35	17050	28.0	0.21		5.89			
F21	DL35	17051	29.0	0.20		< 3.08			
F21	DL35	17052	30.0	0.216	4.17	4.01	0.0030 U	0.0030 U	14.8
G21	DL36	16982	26.0	0.21		8.24			
G21	DL36	16983	27.0	0.20		6.74			
G21	DL36	16984	28.0	0.19		< 3.17			
G21	DL36	16985	29.0	0.19		6.87			
G21	DL36	16986	30.0	0.157	6.00	4.64	0.0026 U	0.0026 U	68.8 J
H21	DL37	16976	26.0	0.60		9.87			
H21	DL37	16977	27.0	0.91		11.38			
H21	DL37	16978	28.0	1.09		12.30			
H21	DL37	16980	29.0	0.92		13.67			
H21	DL37	16981	30.0	0.95	24.2	19.8	0.0025 U	0.0025 U	28.6 J

Table 6
Cell 9 Systematic Soil Boring Sample Results

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

- U - Validation qualifier used to indicate that the result was qualified as non-detect.
- J - Validation qualifier used to indicate that the result is considered an estimate.
- UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
- < - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

- See Figure 7 for boring locations.
- DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.
- Supplemental DL sample is analyzed for Ni off Site by Severn Trent Laboratories, Inc. and the result is bold.
- SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.
- Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.
- Blank cell indicates analysis was not performed.

**Cell 9-Table 7
 Focused Nickel Sample Results
 Severn Trent Laboratories, Inc.**

Subcell	Sample ID	Depth (feet)	Ni (mg/kg)
D19	16972	12.0	544 J
D19	16973	16.0	12.7 J
E20	16301	16.0	93300 J
E20	16971	20.0	761 J
E20	16784	25.5	229 J
F21	16962	23.0	89.5 J
G19	16965	17.9	33.2 J
G19	16964	19.2	16.2 J
G19	16280	19.8	9.9
G20	16281	25.8	94.1
G20	17114	29.9	394
G21	17237	35.0	122
G21	17238	40.0	140
G21	17239	46.0	189
H19	16958	16.0	26.6 J
H19	16963	17.5	36.9 J
H19	16277	19.7	31.1
H20	16966	24.0	102 J
H20	16278	24.7	34.8
H21	16957	25.0	1100 J
H21	16279	25.1	18.1

Analytes:

Ni - Nickel

Units:

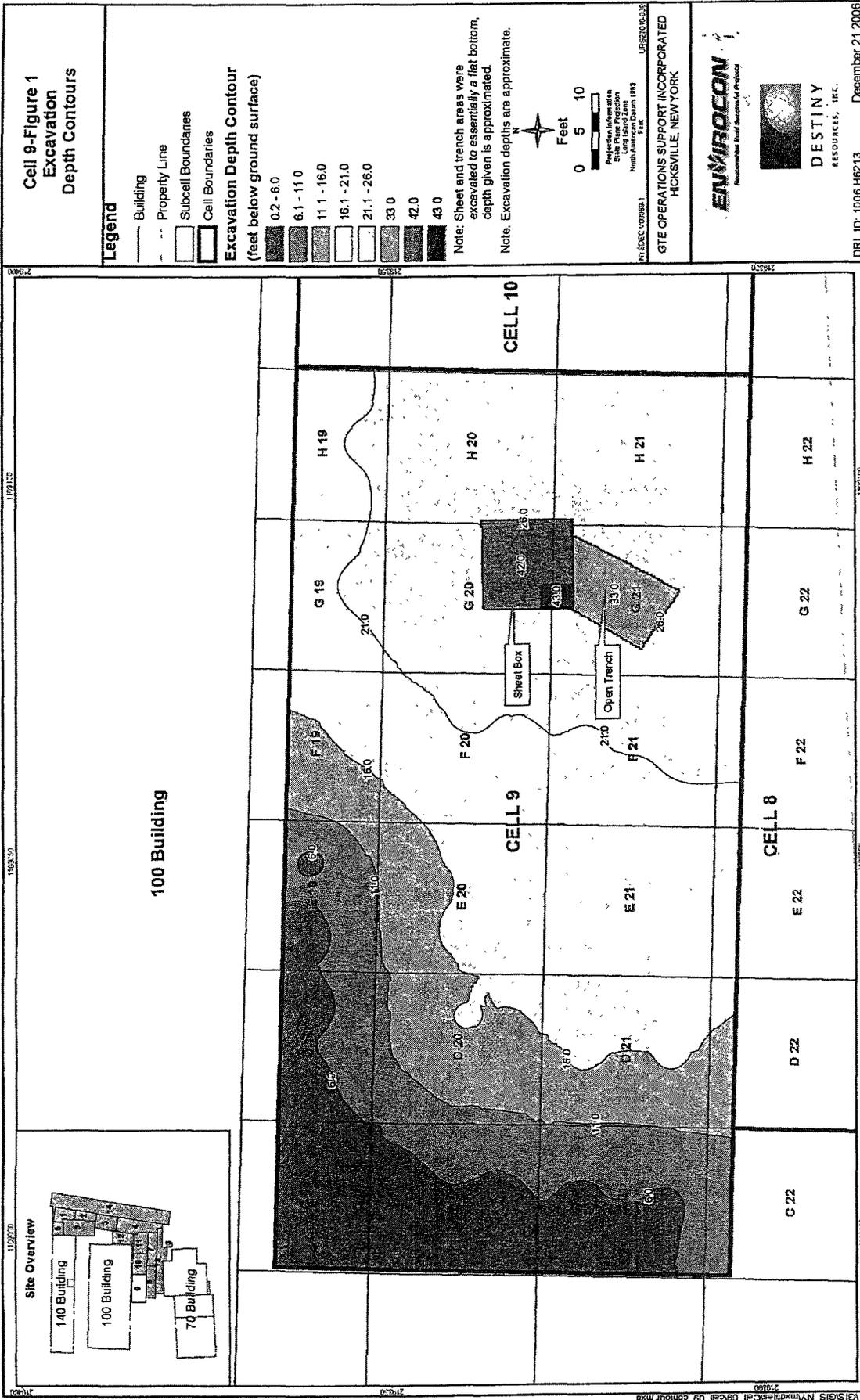
mg/kg - milligram/kilogram

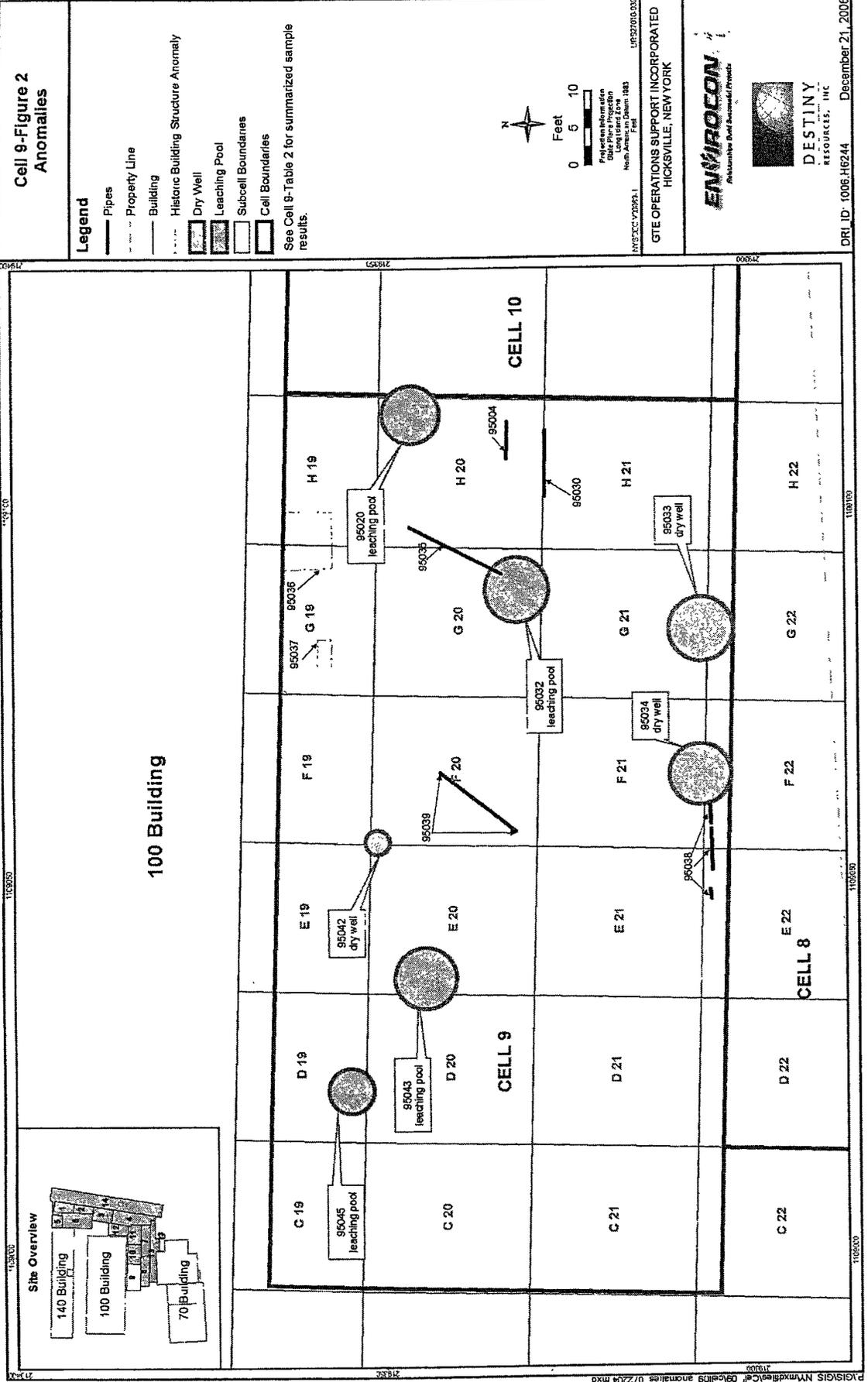
Qualifiers:

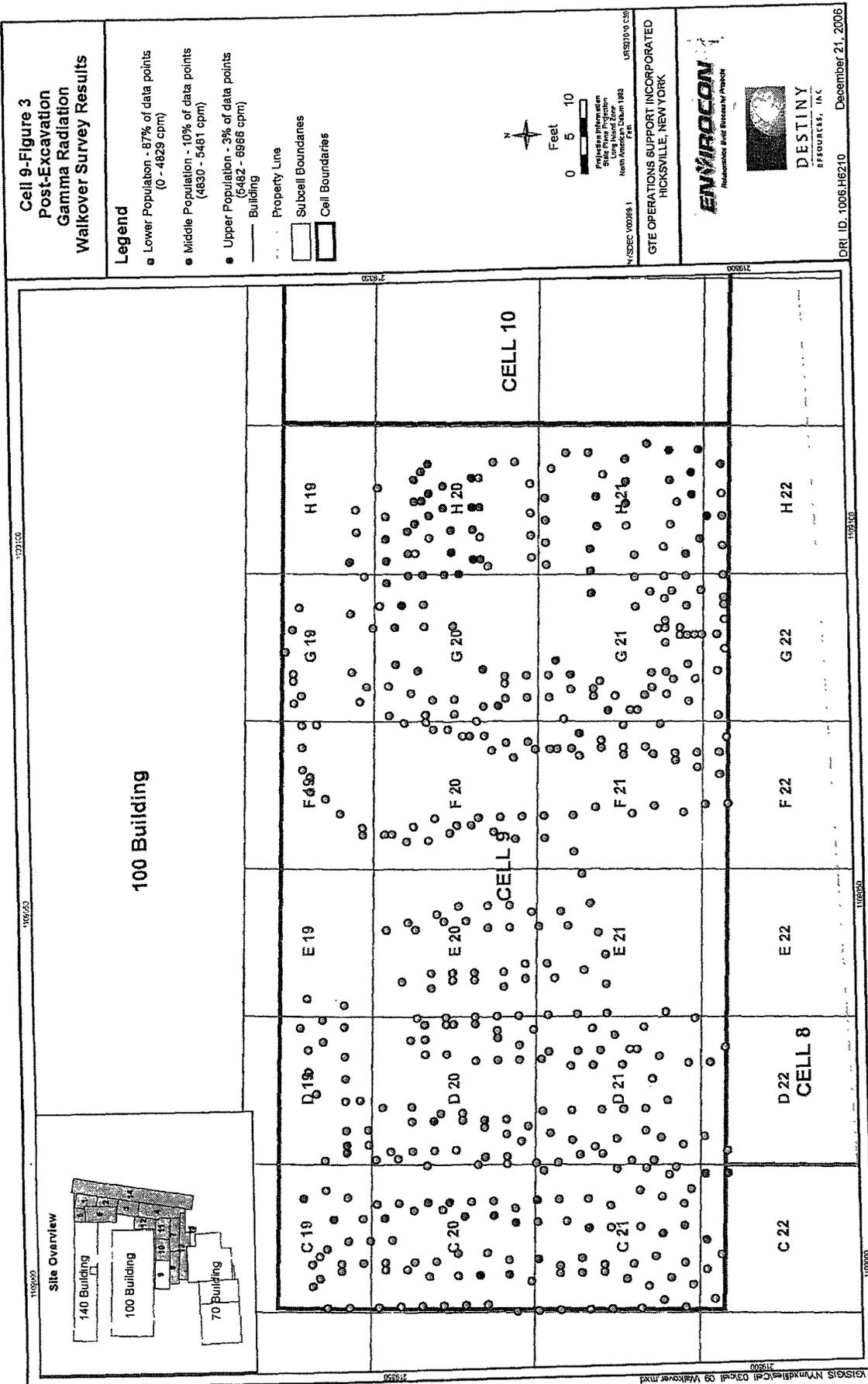
J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

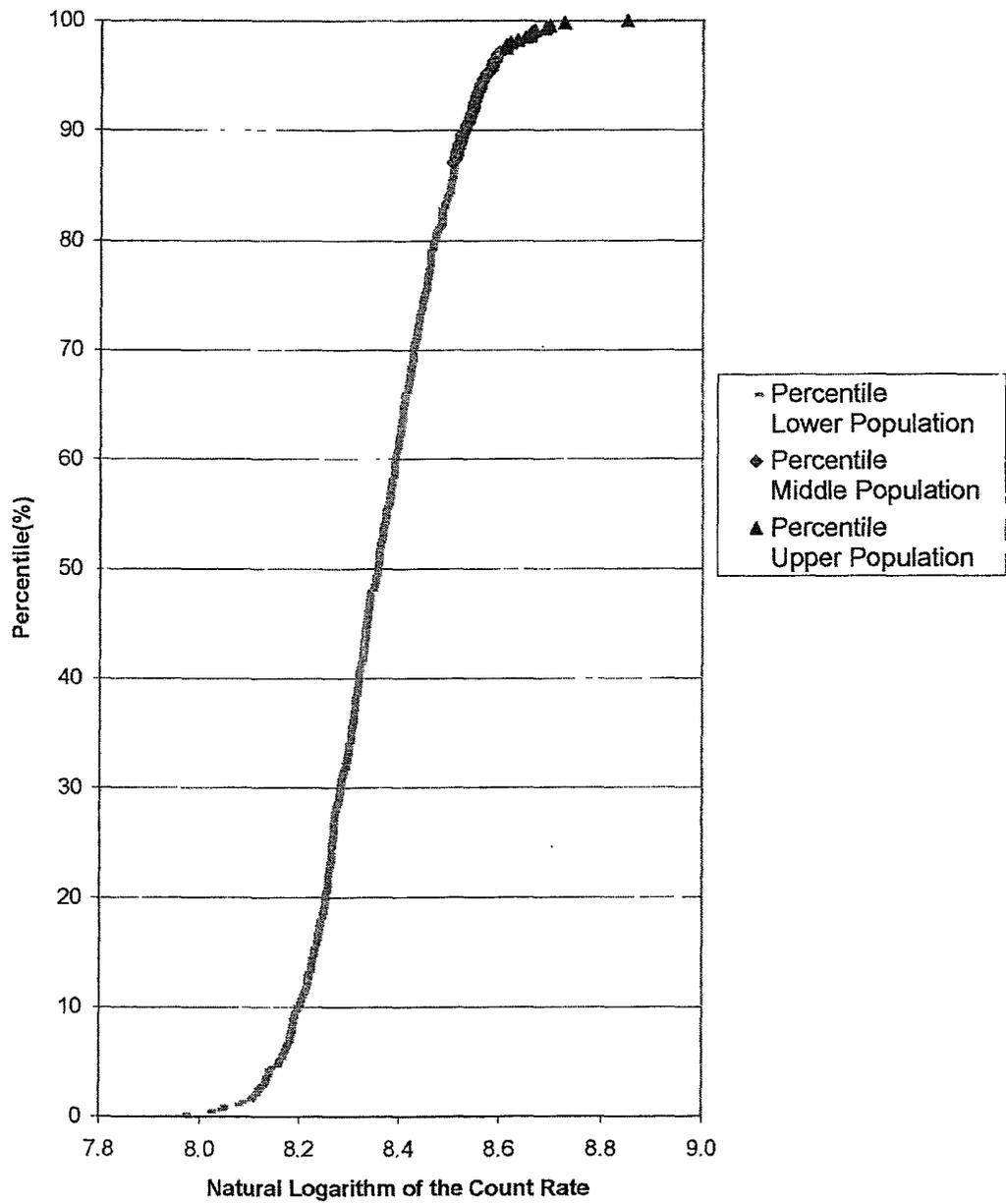
See Cell 9-Figure 8 for sample ids and associated Ni sample locations.







Cell 9-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data



Cell 9-Figure 5 Verification Floor Sample Locations and Results

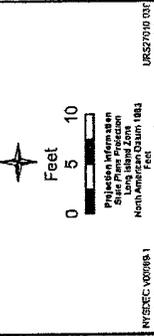
- ## Legend
- Sample Locations
 - ▭ Building
 - ▭ Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

Label Key

[Date]
Sample Type [Sample ID] (Depth)
Sample Results

-Depth in feet bos
-Th-232, U-238, and U-234 in pCi/g
-TCE and PCE in mg/kg
-NI in mg/kg
See Cell 9-Table 3 for summarized sample results

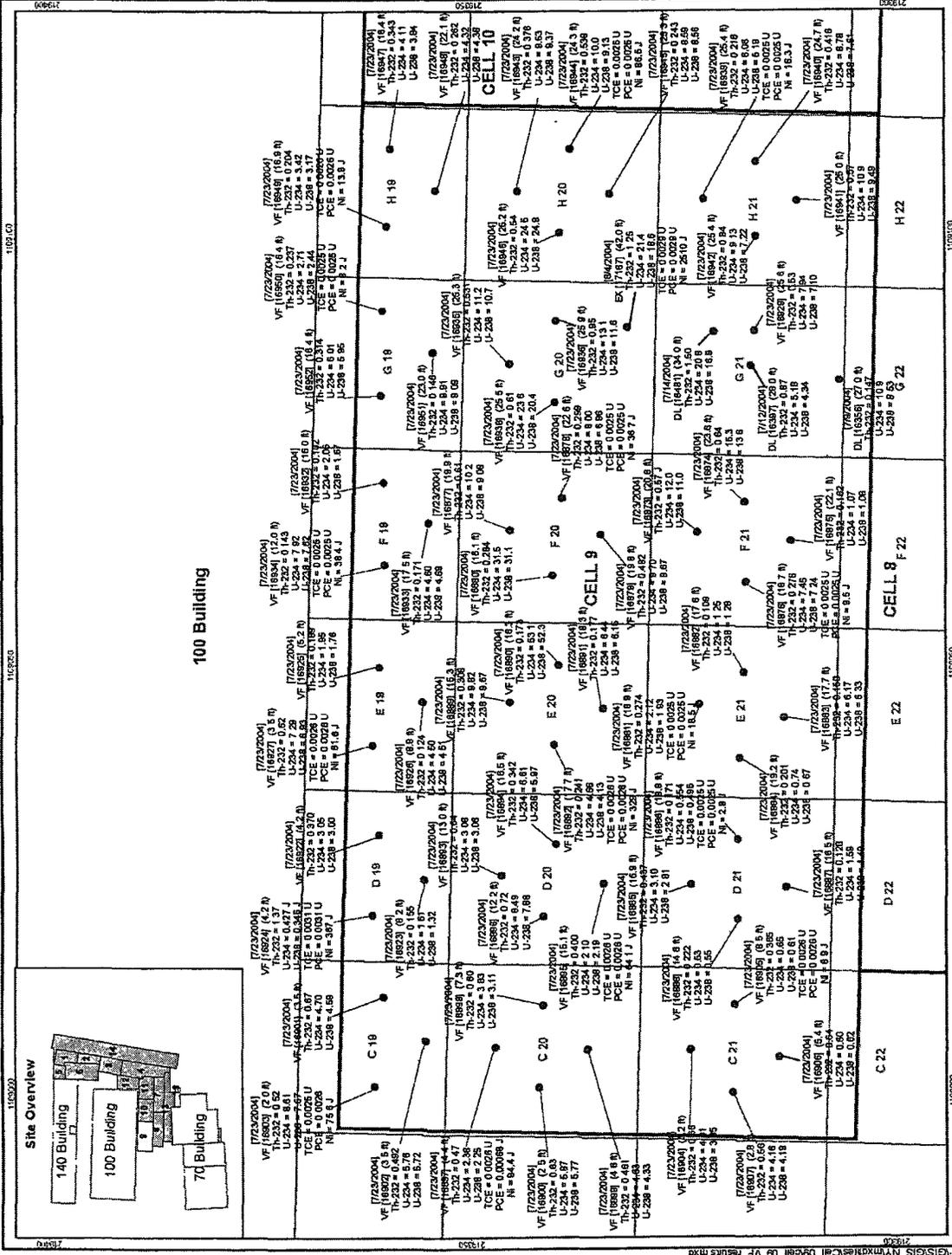
* - DL and EX samples selected to represent VF samples. For sample ID number 17187 (subcell G20, location C7) an EX sample was used. For sample ID numbers 1641 (subcell G21, location A7), 1650 (subcell G21, location C7), and 1639 (subcell G21, location E7) samples, due to a field error in subcell G21, VOCs and NI samples were not collected.

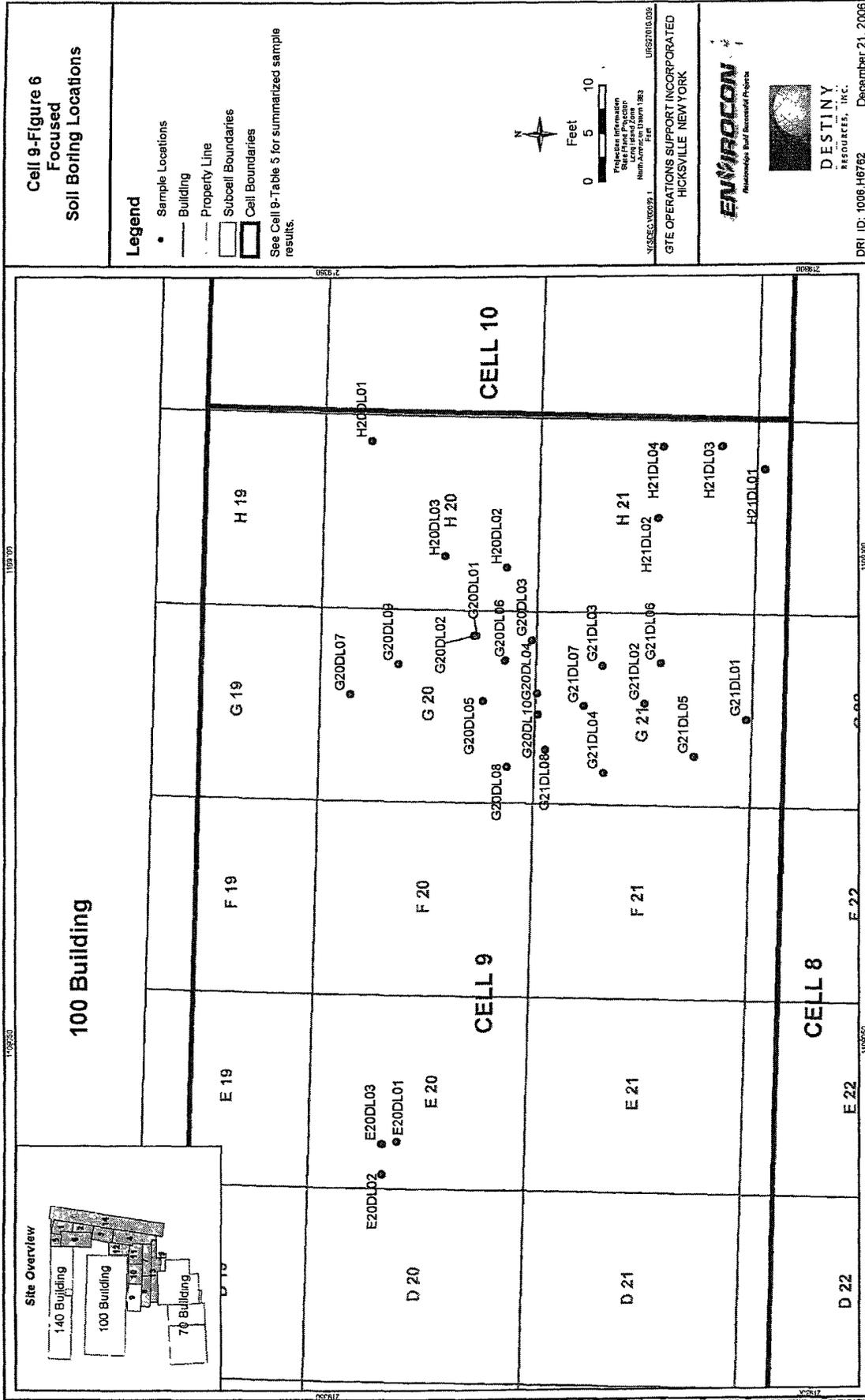


GT E OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

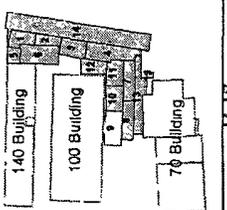


DRI ID: 1006.H6443 December 21, 2006





Site Overview



100 Building

**Cell 9-Figure 6
Focused
Soil Boring Locations**

Legend

- Sample Locations
- Building
- - - Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

See Cell 9-Table 5 for summarized sample results.



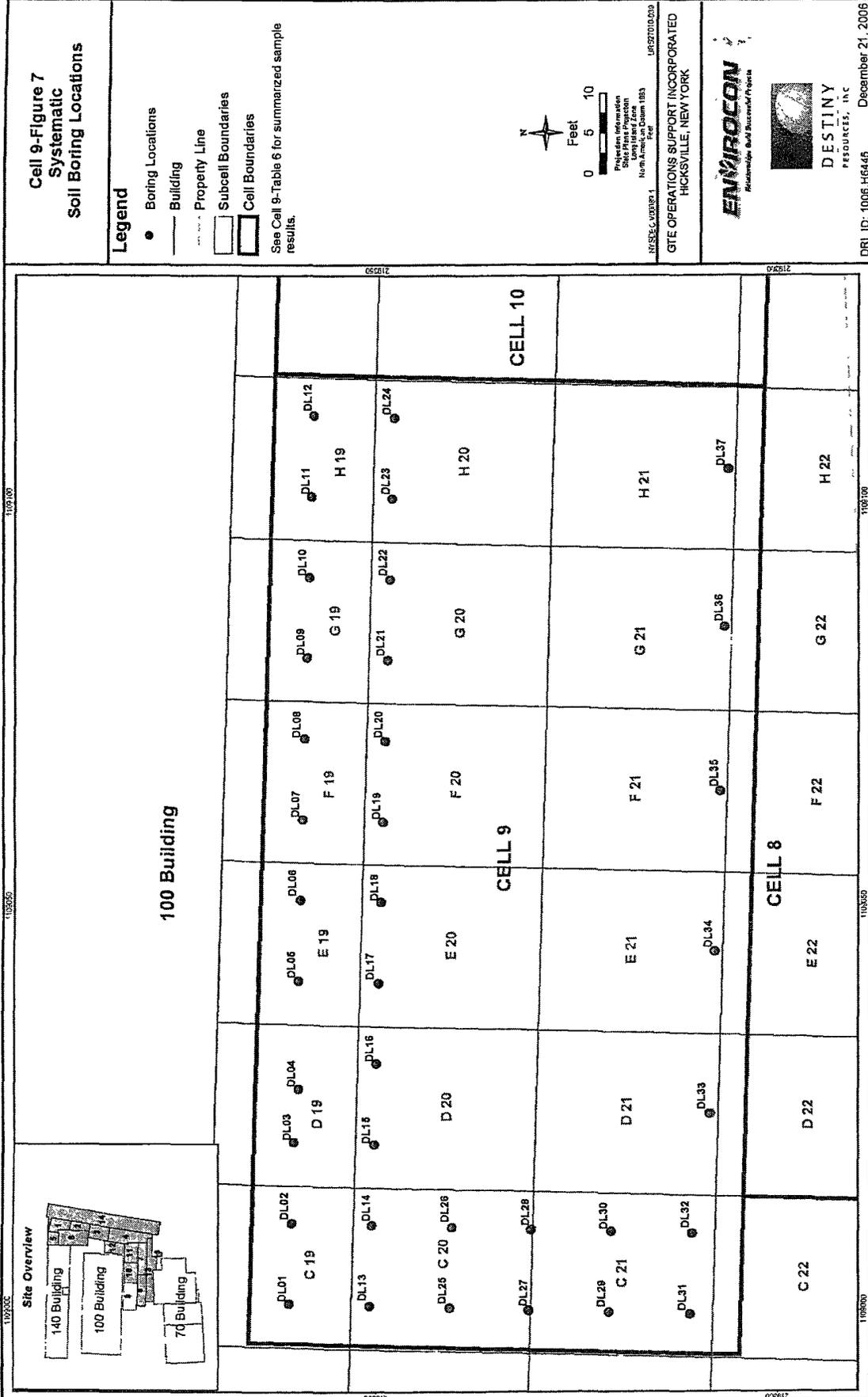
Project Information
 GTE Operations Support
 North American Division 1383
 2006
 LRS27010.026

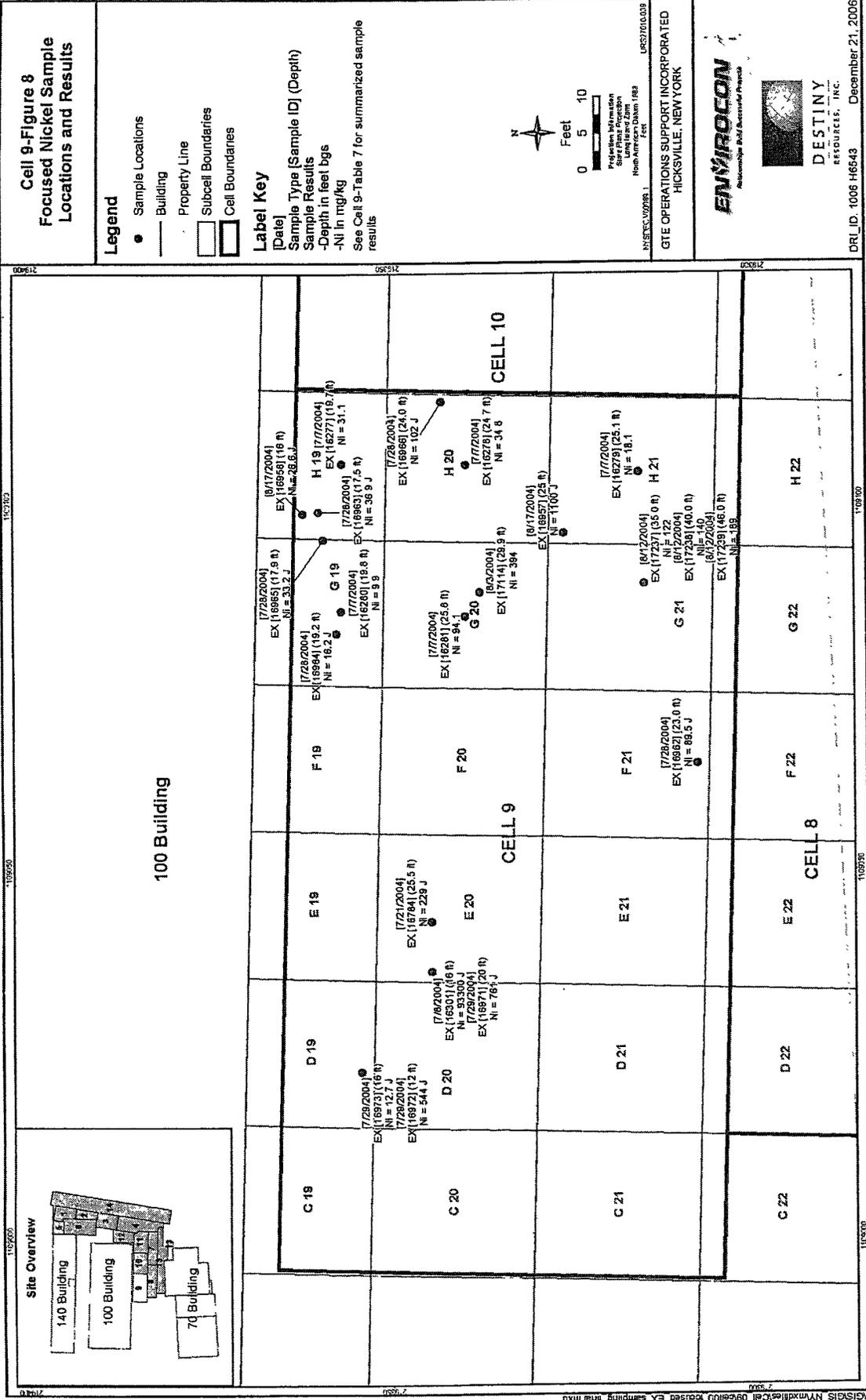
GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



DRJ ID: 1006.H6762 December 21, 2006

PROJECTS \Mx\mxd\Cell C\cell09_focused_sampling_final_10_25_06.mxd





Lucky Tabor

From: Jerry Riggi [jmrigger@gw.dec.state.ny.us]
To: Lucky Tabor; jean.agostinelli@verizon.com
Cc: Barbara Youngberg; John Mitchell
Subject: Cell 9

Sent: Fri 8/20/2004 2:46 PM

Attachments:

We have conducted a walkover survey of Cell 9 and reviewed the CF/VE sample data including the DL samples from the subsurface soil boreholes. (This does not include the DL data obtained in the northern and western slopes, and the southern boundary. We understand the DL information gathered there will be used to guide future remediation, if deemed necessary.) We agree that these results are below the cleanup criteria for uranium and thorium, and see no need for further radiological remediation. Therefore we have no objection to backfilling this cell. Upon receipt and review of your data packages for these cells and receipt of the sample results from our contract lab, we will send a formal response.

Jerry M Riggi
NYSDEC
Bureau of Hazardous Waste and Radiation Management
(518) 402-8575
jmrigger@gw.dec.state.ny.us

Scanned on 20 Aug 2004 18:47:12
Scanning by <http://erado.com>

Attachment A
Page 1 of 1

<http://mail.envirocon.com/exchange/LTabor/Inbox/Cell%209.EML?Cmd=open>

8/24/2004

GTES0003457

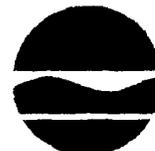
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

April 1, 2004

Jean Agostinelli, Project Manager
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Report, Spagnoli Road (SPAG2), March 24, 2004
Former Sylvania Electric Products Facility (FSEPF), #V00089-1

Dear Ms. Agostinelli:

I have read the Borrow Soils Report for Spagnoli Road dated March 24, 2004. Based on the results of your samples, the Department has no objections to you using these soils for backfill at the FSEPF site.

I have identified what I believe to be a typographical error in the notes for Table 4 (PCB results). In regard to the results by the Method 8082, it is stated, "Results reported in mg/kg or parts per billion (ppb)." Mg/kg should instead be " μ g/kg". If I am incorrect, please notify me.

Sincerely,

Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi
J. Nealon, NYSDOH



July 29, 2004

Jean Agostinelli
Vice President - Controller
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road
(SPAG2), Melville, NY

Dear Ms. Agostinelli:

I have reviewed the subject report on the borrow soils proposed for use as backfill at the Former Sylvania Electric Product Facility site in Hicksville, site #V00089-1. Based on the sampling results presented in this report, I find the borrow soils at this location to be suitable for use as backfill at the site.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi

Cell 9 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 9, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 9 consists of subcells C20 to H20, C21 to H21 and the southern portion of subcells C19 to H19. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 9 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 66 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 66 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 9, (Attachment page 6), a minimum of 15 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 66 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 13 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 5 of the report (Attachment page 12) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.46. As is explained in Section 10.1.1, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 9

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
16901	0.67	4.70	4.59
16902	0.492	5.76	5.72
16903	0.52	8.61	7.67
16897	0.47	2.38	2.25
16898	0.60	3.83	3.11
16899	0.461	4.63	4.33
16900	0.63	5.87	5.77
16904	0.66	4.01	3.85
16905	0.365	0.65	0.61
16906	0.64	0.60	0.62
16907	0.56	4.16	4.19
16922	0.370	3.05	3.00
16923	0.155	1.61	1.32
16924	1.37	0.427 J	0.345 J
16893	0.64	3.08	3.06
16894	0.342	6.61	5.97
16895	0.400	2.10	2.19
16896	0.72	8.49	7.88
16885	0.437	3.10	2.81
16886	0.171	0.554	0.495
16887	0.128	1.59	1.49
16888	0.222	0.53	0.55
16925	0.189	1.95	1.76
16926	0.124	4.50	4.51
16927	0.62	7.29	6.93
16889	0.308	9.82	9.67
16890	0.173	53.1	52.3
16891	0.177	6.44	6.15
16892	0.241	4.66	4.13
16881	0.274	2.12	1.93
16882	0.109	1.25	1.28
16883	0.150	6.17	6.33
16884	0.201	0.74	0.67
16932	0.102	2.05	1.67
16933	0.171	4.60	4.69
16934	0.143	7.92	7.62
16877	0.61	10.2	9.08
16878	0.299	8.00	6.96
16879	0.482	9.70	8.67
16880	0.284	31.5	31.1
16873	0.57 J	12.0	11.0
16874	0.64	15.3	13.6
16875	0.162	1.07	1.08
16876	0.276	7.45	7.24

Table C.1

Cell 9

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
16950	0.237	2.71	2.44
16951	0.146	9.91	9.09
16952	0.314	6.01	5.95
16935	0.531	11.2	10.7
16936	0.95	13.1	11.6
17167	1.25	21.4	18.6
16938	0.61	23.6	20.4
16481	1.50	20.8	16.9
16929	0.53	7.94	7.10
16356	0.147	10.9	8.53
16397	0.87	5.18	4.34
16947	0.343	4.11	3.84
16948	0.262	4.32	4.38
16949	0.204	3.42	3.17
16943	0.376	9.63	9.37
16944	0.538	10.0	9.13
16945	0.243	8.59	8.56
16946	0.54	24.5	24.9
16939	0.216	6.06	5.19
16940	0.416	8.78	7.61
16941	0.57	10.9	9.49
16942	0.84	9.13	7.22

Notes:

Cell area = 680 sq. meters

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLW units are pCi/g.
Building surface DCGLW units are dpm/100 cm².

Contaminant	Type	DCGLW	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

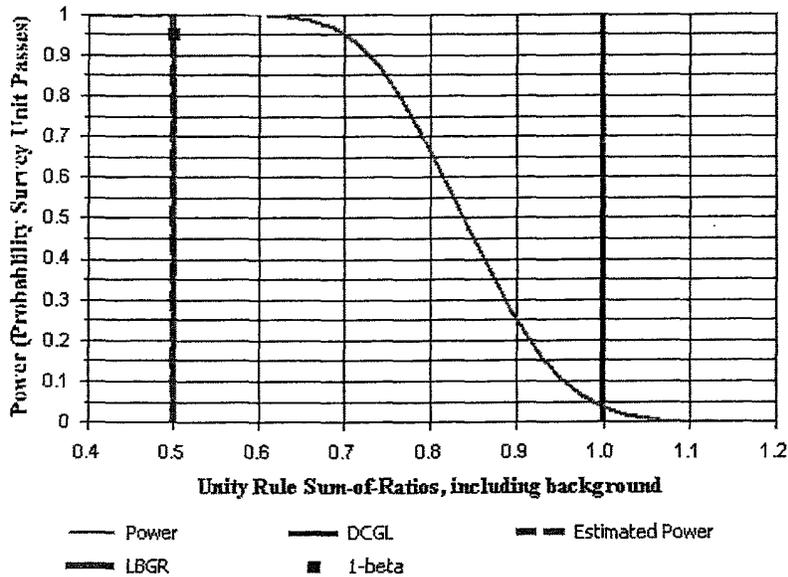


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 9 with STL Data		
Comments:			
Area (m ²):	680	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.26
DCGL (SOR):	1	Sample Size (N):	15
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.5
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	15
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.5 \pm 0.3	N/A
U-234	8 \pm 8.5	N/A
U-238	8 \pm 8.5	N/A

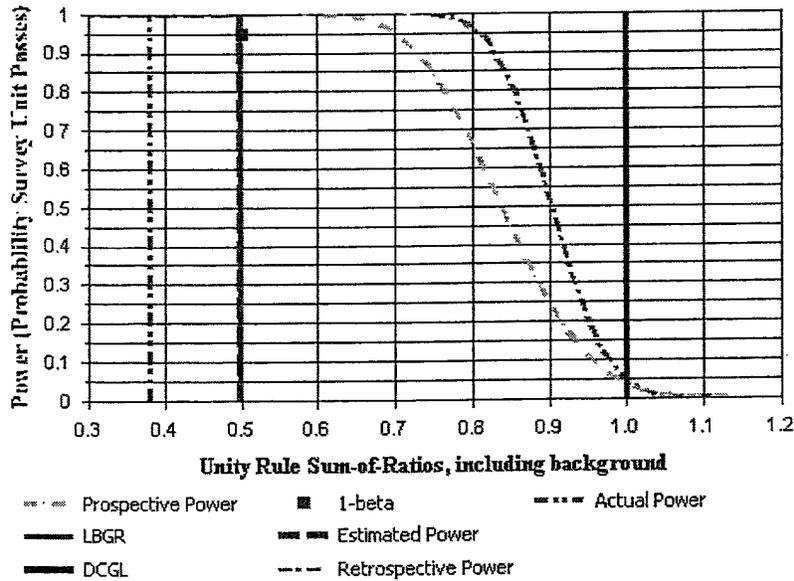


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 9 with STL Data
Report Number: 1
Survey Unit Samples: 66
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
16901	S	0.67	4.7	4.59
16902	S	0.49	5.76	5.72
16903	S	0.52	8.61	7.67
16897	S	0.47	2.38	2.25
16898	S	0.6	3.83	3.11
16899	S	0.46	4.63	4.33
16900	S	0.63	5.87	5.77
16904	S	0.66	4.01	3.85
16905	S	0.36	0.65	0.61
16906	S	0.64	0.6	0.62
16907	S	0.56	4.16	4.19
16922	S	0.37	3.05	3
16923	S	0.16	1.61	1.32
16924	S	1.37	0.43	0.34
16893	S	0.64	3.08	3.06
16894	S	0.34	6.61	5.97
16895	S	0.4	2.1	2.19
16896	S	0.72	8.49	7.88
16885	S	0.44	3.1	2.81
16886	S	0.17	0.55	0.5
16887	S	0.13	1.59	1.49
16888	S	0.22	0.53	0.55
16925	S	0.19	1.95	1.76
16926	S	0.12	4.5	4.51
16927	S	0.62	7.29	6.93
16889	S	0.31	9.82	9.67
16890	S	0.17	53.1	52.3
16891	S	0.18	6.44	6.15
16892	S	0.24	4.66	4.13
16881	S	0.27	2.12	1.93
16882	S	0.11	1.25	1.28
16883	S	0.15	6.17	6.33
16884	S	0.2	0.74	0.67
16932	S	0.1	2.05	1.67
16933	S	0.17	4.6	4.69
16934	S	0.14	7.92	7.62
16877	S	0.61	10.2	9.08
16878	S	0.3	8	6.96
16879	S	0.48	9.7	8.67
16880	S	0.28	31.5	31.1
16873	S	0.57	12	11
16874	S	0.64	15.3	13.6
16875	S	0.16	1.07	1.08
16876	S	0.28	7.45	7.24
16950	S	0.24	2.71	2.44
16951	S	0.15	9.91	9.09
16952	S	0.31	6.01	5.95
16935	S	0.53	11.2	10.7
16936	S	0.95	13.1	11.6
17167	S	1.25	21.4	18.6
16938	S	0.61	23.6	20.4



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
16481	S	1.5	20.8	16.9
16929	S	0.53	7.94	7.1
16356	S	0.15	10.9	8.53
16397	S	0.87	5.18	4.34
16947	S	0.34	4.11	3.84
16948	S	0.26	4.32	4.38
16949	S	0.2	3.42	3.17
16943	S	0.38	9.63	9.37
16944	S	0.54	10	9.13
16945	S	0.24	8.59	8.56
16946	S	0.54	24.5	24.9
16939	S	0.22	6.06	5.19
16940	S	0.42	8.78	7.61
16941	S	0.57	10.9	9.49
16942	S	0.84	9.13	7.22

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
16901	S	0.43
16902	S	0.41
16903	S	0.51
16897	S	0.26
16898	S	0.35
16899	S	0.34
16900	S	0.46
16904	S	0.39
16905	S	0.16
16906	S	0.25
16907	S	0.37
16922	S	0.25
16923	S	0.11
16924	S	0.5
16893	S	0.35
16894	S	0.37
16895	S	0.23
16896	S	0.58
16885	S	0.27
16886	S	0.08
16887	S	0.11
16888	S	0.1
16925	S	0.14
16926	S	0.22
16927	S	0.51



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
16889	S	0.5
16890	S	2.17
16891	S	0.32
16892	S	0.26
16881	S	0.18
16882	S	0.09
16883	S	0.3
16884	S	0.1
16932	S	0.11
16933	S	0.25
16934	S	0.36
16877	S	0.6
16878	S	0.41
16879	S	0.54
16880	S	1.35
16873	S	0.66
16874	S	0.81
16875	S	0.1
16876	S	0.39
16950	S	0.19
16951	S	0.43
16952	S	0.35
16935	S	0.63
16936	S	0.83
17167	S	1.25
16938	S	1.1
16481	S	1.29
16929	S	0.49
16356	S	0.44
16397	S	0.5
16947	S	0.28
16948	S	0.27
16949	S	0.2
16943	S	0.51
16944	S	0.57
16945	S	0.43
16946	S	1.18
16939	S	0.3
16940	S	0.48
16941	S	0.61
16942	S	0.63



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	66	N/A	N=15
Mean (SOR)	0.46	N/A	0.5
Median (SOR)	0.38	N/A	N/A
Std Dev (SOR)	0.36	N/A	0.26
High Value (SOR)	2.17	N/A	N/A
Low Value (SOR)	0.08	N/A	N/A

Statistical Test Summary

S+:	60
Critical Value:	40
Result:	Pass

Data	DCGLw - Data	Sign
0.43	0.57	+
0.41	0.59	+
0.51	0.49	+
0.26	0.74	+
0.35	0.65	+
0.34	0.66	+
0.46	0.54	+
0.39	0.61	+
0.16	0.84	+
0.25	0.75	+
0.37	0.63	+
0.25	0.75	+
0.11	0.89	+
0.5	0.50	+
0.35	0.65	+
0.37	0.63	+
0.23	0.77	+
0.58	0.42	+
0.27	0.73	+
0.08	0.92	+
0.11	0.89	+
0.1	0.90	+
0.14	0.86	+
0.22	0.78	+
0.51	0.49	+
0.5	0.50	+
2.17	-1.17	-



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.32	0.68	+
0.26	0.74	+
0.18	0.82	+
0.09	0.91	+
0.3	0.70	+
0.1	0.90	+
0.11	0.89	+
0.25	0.75	+
0.36	0.64	+
0.6	0.40	+
0.41	0.59	+
0.54	0.46	+
1.35	-0.35	-
0.66	0.34	+
0.81	0.19	+
0.1	0.90	+
0.39	0.61	+
0.19	0.81	+
0.43	0.57	+
0.35	0.65	+
0.63	0.37	+
0.83	0.17	+
1.25	-0.25	-
1.1	-0.10	-
1.29	-0.29	-
0.49	0.51	+
0.44	0.56	+
0.5	0.50	+
0.28	0.72	+
0.27	0.73	+
0.2	0.80	+
0.51	0.49	+
0.57	0.43	+
0.43	0.57	+
1.18	-0.18	-
0.3	0.70	+
0.48	0.52	+
0.61	0.39	+
0.63	0.37	+

Cell 10 Status Report

INTRODUCTION

Cell 10 is comprised of all or portions of subcells I19 to M19, I20 to M20, I21 to M21, and I22 to M22. Cell 10 is located on the south side of the 100 Property (Cell 10-Figure 1 and Figure 6 in Volume I). Excavation of Cell 10 began on February 13, 2004 and was completed on April 2, 2004. Verbal approval to backfill Cell 10 was received from NYSDEC representatives on March 31, 2004 and documented in an e-mail on May 12, 2004 (Cell 10-Attachment A). A formal request to backfill Cell 10 was submitted in a report to NYSDEC titled *Cell 10 – Attainment of Radiological and Chemical Cleanup Levels* dated June 17, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 10 was backfilled beginning April 5, 2004 and was completed on April 29, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 1 and Spagnoli 2). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in two reports. The first report was titled *Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard*, dated December 20, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated January 5, 2004 (Cell 10-Attachment B, page 1). The second report was titled *Borrow Soils Characterization Survey and Sampling: Spagnoli Road (SPAG2), Melville, NY*, dated March 24, 2004. Approval to use these soils for backfill was granted from NYSDEC in a letter dated April 1, 2004 (Cell 10-Attachment B, page 2).

DEPTHS OF EXCAVATION

Cell 10 was excavated to depths ranging from 12 to 24 ft bgs. The excavation depths for each subcell are provided in Cell 10-Table 1 and are shown on Cell 10-Figure 1. (See Section 6.2.4 of Volume I for a description of how the excavation depths are determined.) A total of 15,353,850 pounds of soil and debris (728 Lift LinersTM) were removed from Cell 10 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 10, various anomalies were encountered. The anomalies were pipes, concrete from drywells and a leaching pool, and an underground storage tank (UST). A list of Cell 10 anomalies along with analytical results from anomaly samples is provided in Cell 10-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 10-Figure 2. The 3,400-gallon UST that was unearthed in subcells I20 and J20 is the subject of a detailed report provided in *Tank Report, Cell 10, 100 Cantiague Rock Road, Hicksville, NY* issued to NYSDEC on July 13, 2004. All of the anomalies encountered

during the excavation activities in Cell 10 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 10, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as shown on Cell 10-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 10-Figure 4 depicts a CFD plot of the 521 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 10-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 of Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I). Since less than 25 percent of subcells I22 to M22 are in Cell 10, the portions of these subcells that are north of the sheet pile wall are considered part of subcells I21 to M21, respectively, for sampling purposes.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

SYSTEMATIC SOIL SAMPLING

Systematic soil sampling was performed below the excavation depths using hand augering in two areas of Cell 10. This sampling was performed to confirm that residual impacts were not present above cleanup levels below the depths of excavation.

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

The first area sampled was adjacent to the north sheet pile wall. Two rows of sample points were established in an east-west line (Cell 10-Figure 6). At each sample point, a soil boring was advanced from the excavated surface, which ranged from approximately 12 to 20 ft bgs, to a final depth of approximately 27 ft bgs. Samples were collected at 1-foot intervals. A total of 20 soil borings were completed, 10 in each row.

The second area was an east-west line just north of the south sheet pile wall. This area also included three locations along the southern portion of the west sheet pile wall in subcell I21 (Cell 10-Figure 6). A total of 11 soil borings were advanced from the surface, which ranged from approximately 20 to 25 ft bgs, to a final depth that ranged from approximately 24 to 30 ft bgs. Samples were collected at 1-foot intervals.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 10-Table 3 and are shown on Cell 10-Figure 5. Cell 10-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the systematic soil samples are provided in Cell 10-Table 5 and the boring locations are shown on Cell 10-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 10, passed this evaluation (Cell 10-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the radiological and chemical Site cleanup levels were attained for Cell 10.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 10-Table 1:	Cell 10 Subcell Excavation Depths
Cell 10-Table 2:	Cell 10 Anomaly Sample Results
Cell 10-Table 3:	Cell 10 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 10-Table 4:	Cell 10 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 10-Table 5:	Cell 10 Systematic Soil Boring Sample Results

Figures

Cell 10-Figure 1:	Cell 10 Excavation Depth Contours
Cell 10-Figure 2:	Cell 10 Anomalies
Cell 10-Figure 3:	Cell 10 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 10-Figure 4:	Cumulative Frequency Distribution for Cell 10 Gamma Radiation Walkover Survey Data
Cell 10-Figure 5:	Cell 10 Verification Floor Sample Locations and Results
Cell 10-Figure 6:	Cell 10 Systematic Soil Boring Locations

Attachments

Cell 10-Attachment A:	E-Mail from NYSDEC to GTEOSI dated May 12, 2004
Cell 10-Attachment B:	Letters from NYSDEC to GTEOSI dated January 5, 2004 and April 1, 2004
Cell 10-Attachment C:	Cell 10 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 10-Table 2
Anomaly Sample Results**

Analytes:	
Tb-232 - Thorium-232	TCE - Trichloroethane
U-234 - Uranium-234	PCE - Tetrachloroethane
U-235 - Uranium-235	N - Nickel
U-238 - Uranium-238	
Units:	
pCi/g - picocurie/gram	cpm - counts per minute
mg/kg - milligram/kilogram	cpm/100 cm ² - disintegrations per minute/100 square centimeters
Qualifiers:	
U - Validation qualifier used to indicate that the result was qualified as non-detect.	
J - Validation qualifier used to indicate that the result is considered as a justice.	
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.	
← - Validation qualifier (for on-site radiological constituent) used to indicate that the result was qualified as non-detect.	
Notes:	
See Cell 10-Figure 2 for sample locations.	
Samples were analyzed on site for radionuclides (Tb-232 and U-238) using the gamma spectroscopy system.	
NA - Analysis was not performed.	
NS - Not sampled.	
(STL) - Results are from Seven Trent Laboratories, Inc.	
MDA - Minimum Detectable Activity.	
Due to an artifact in the laboratory data reporting program, the on-site analytical data should be interpreted to two significant figures.	

Cell 10-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tr 232 (pg/g)	U-234 (pg/g)	U-238 (pg/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
I19	B	11762	16.3	0.32 J	1.9	1.83			
I19	C	11763	18.3	0.13 U	1.37	0.94			
I19	D	11764	16.6	0.22 J	1.1	1.24	0.0025 U	0.0025 UJ	3.8 J
I20	A	11754	20.7	0.33 J	9.15	8.63			
I20	B	11755	22.2	0.2 UJ	11	10.4	0.0026 U	0.00027 J	13.7
I20	C	11756	22.4	0.24 J	4.03	3.6			
I20	D	11757	21.6	0.21 J	6.07	5.2			
I21	A	11744	23.1	0.14 J	3.4	3			
I21	B	11745	22.8	0.14 U	8.25	7.9			
I21	C	11746	22.5	0.73	9.2	7.2	0.0026 U	0.0026 UJ	3.6 J
I21	D	11749	22.8	0.32 J	5.05	4.51			
J19	B	11741	15.1	0.15 U	0.34 J	0.19 U			
J19	C	11742	17.4	0.18 U	0.77	0.61	0.0025 U	0.0025 UJ	0.72 J
J19	D	11743	15.8	0.13 J	0.37 J	0.41			
J20	A	11750	20.3	0.21 J	1.98	1.5			
J20	B	11751	21.2	0.13 J	24.9	22.1	0.0026 U	0.00038 J	2.7 J
J20	C	11752	22.4	0.25 J	4.21	4.22			
J20	D	11753	21.5	0.14 UJ	5.75	5.63			
J21	A	11758	23.3	0.3 J	5.37	5.22			
J21	B	11759	23.3	0.18 UJ	4.16	3.93			
J21	C	11760	23.4	0.45	11.2	8.69	0.0025 U	0.0025 UJ	14.6
J21	D	11761	23.6	0.21 J	7.82	6.74			
K19	B	11729	14.0	0.15 J	0.31 J	0.29 J	0.0025 U	0.00021 J	3.2 J
K19	C	11730	17.2	0.094 J	0.35 J	0.24 J			
K19	D	11731	14.8	0.14 UJ	0.32 J	0.29 J			
K20	A	11737	19.3	0.18 J	0.28	0.26			
K20	B	11738	19.7	0.14 J	0.29 J	0.29 J	0.0026 U	0.0011 J	4.6
K20	C	11739	21.0	0.36 J	1.03	0.98			
K20	D	11740	20.2	0.17 J	2.16	1.74			
K21	A	11733	22.6	0.28 J	2.54	2.31	0.0025 U	0.00038 J	10.8
K21	B	11734	22.8	0.15 J	2.68	2.85			
K21	C	11735	23.0	0.13 UJ	4.21	3.22			
K21	D	11736	23.1	0.21 J	3.69	3.02			
L19	B	11721	12.7	0.16 J	0.39 J	0.35 J			
L19	C	11722	14.2	0.13 U	0.74	0.61			
L19	D	11720	13.4	0.2 J	0.57	0.35 J	0.0025 UJ	0.0025 U	1.6 J
L20	A	11724	15.9	0.086 J	0.57	0.46			
L20	B	11725	15.9	0.3 J	6.77	6.37			
L20	C	11726	19.1	0.13 U	1.24	1.17	0.0025 U	0.00034 J	4.2
L20	D	11727	18.0	0.26 J	1.35	1.39			
L21	A	11716	21.3	0.17 J	3.06 J	2.83 J			
L21	B	11717	20.9	0.12 J	2.88	2.62			
L21	C	11718	21.6	0.11 U	4	3.73			
L21	D	11719	22.0	0.2 J	3.57	3.48	0.0025 U	0.0025 U	4.1
M19	D	11723	12.3	0.14 U	0.49	0.48	0.0026 U	0.0026 U	2.4 J
M20	D	11728	13.9	0.2 J	0.78 J	0.58 J	0.0025 U	0.00021 J	1.9 J
M21	D	11715	19.5	0.2 U	2.3	1.91	0.0025 U	0.0025 U	1.4 J

Cell 10-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

Notes:

See Cell 10-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

Cell 10-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	0.73	22.5	I21
Maximum U-234 (pCi/g)	24.9	21.2	J20
Maximum U-238 (pCi/g)	22.1	21.2	J20
Maximum TCE (mg/kg)	0.0026 U	19.7	K20
		22.2	I20
		22.5	I21
		21.2	J20
		12.3	M19
Maximum PCE (mg/kg)	0.0011 J	19.7	K20
Maximum Ni (mg/kg)	14.6	23.4	J21

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Sample	Boring Location	Sample ID	Depth (feet)	Tb-212 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Nr (mg/kg)
I19	DL01	11968	16.0	0.31		3.22 UJ			
I19	DL01	11970	17.0	0.27		< 2.58			
I19	DL01	11971	18.0	0.28		< 3.81			
I19	DL01	11972	19.0	0.28		< 3.60			
I19	DL01	11976	20.0	0.28		< 2.96			
I19	DL01	11977	21.0	0.30		5.62 J			
I19	DL01	11978	22.0	0.25		3.87 J			
I19	DL01	11980	23.0	0.24		3.36 UJ			
I19	DL01	11981	24.0	0.21		< 2.80			
I19	DL01	11982	25.0	0.18		2.35 UJ			
I19	DL01	11983	26.0	0.21		5.11 J			
I19	DL01	12003	27.0	0.26 J	1.91	1.38	0.0026 U	0.0026 U	4.0 J
I21	DL01	11290	23.0	0.30		3.85			
I21	DL01	11291	24.0	0.20		18.07			
I21	DL01	11294	25.0	0.19	2.94	2.60	0.00052 J	0.0025 UJ	17.2
I22	DL01	11798	24.0	0.51		4.49			
I22	DL01	11799	25.0	0.64		5.86 J			
I22	DL01	11800	26.0	0.36		< 3.70			
I22	DL01	11801	27.0	0.51		7.63			
I22	DL01	11802	28.0	0.33		< 3.37			
I22	DL01	11803	29.0	0.51		6.55			
I22	DL01	11816	30.0	0.23	4.79	3.18	0.0026 U	0.0026 UJ	0.55 J
J22	DL01	11826	24.0	0.39		< 4.03			
J22	DL01	11827	25.0	0.52		< 5.72			
J22	DL01	11828	26.0	0.34		7.22			
J22	DL01	11829	27.0	0.51		9.15			
J22	DL01	11833	28.0	0.53		7.39 J			
J22	DL01	11834	29.0	0.51	15.2	8.03			
M22	DL01	11863	21.0	0.21		3.78			
M22	DL01	11864	22.0	0.20		5.99			
M22	DL01	11865	23.0	0.17		< 3.53			
M22	DL01	11866	24.0	0.23		< 3.42			
M22	DL01	11867	25.0	0.35		10.65			
M22	DL01	11868	26.0	0.35		13.03			
M22	DL01	11869	27.0	0.22		12.35			
M22	DL01	11870	28.0	0.23		10.41			
M22	DL01	11871	29.0	0.23		7.17			
M22	DL01	11874	30.0	0.22	5.44	5.53	0.0026 U	0.0026 UJ	0.97 J
I19	DL02	12278	17.0	< 0.02		5.31 J			
I19	DL02	12279	18.0	0.17		< 2.43			
I19	DL02	12280	19.0	0.17		< 3.29			
I19	DL02	12287	20.0	0.22		< 2.28			
I19	DL02	12288	21.0	0.16 J		< 2.28			
I19	DL02	12294	22.0	0.21		< 2.37			
I19	DL02	12295	23.0	0.21		< 3.53			
I19	DL02	12296	24.0	0.16 J		< 2.61			
I19	DL02	12301	25.0	0.23 J		3.15 J			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
I19	DL02	12302	26.0	0.05 UJ		< 3.00			
I19	DL02	12303	27.0	0.14 J	0.86	0.54	0.0026 U	0.0026 UJ	1.1 J
I21	DL02	11292	23.0	0.18		5.14 J			
I21	DL02	11293	24.0	0.15		< 2.08			
I21	DL02	11295	25.0	0.36	8.89	7.79	0.00040 J	0.0025 UJ	6.9
I22	DL02	11804	24.0	0.44		5.39			
I22	DL02	11805	25.0	0.37		< 4.57			
I22	DL02	11806	26.0	0.51		< 6.18			
I22	DL02	11807	27.0	0.36		< 3.14			
I22	DL02	11808	28.0	0.36		4.91			
I22	DL02	11809	29.0	0.38		< 2.78			
I22	DL02	11820	30.0	0.45	3.97	2.64	0.0025 U	0.0025 UJ	1.4 J
J22	DL02	11835	24.0	0.71		8.67			
J22	DL02	11836	25.0	0.86		14.35			
J22	DL02	11837	26.0	1.49		16.83			
J22	DL02	11840	27.0	1.36		12.25			
J22	DL02	11841	28.0	1.45		8.00			
J22	DL02	11842	29.0	1.40		< 5.56			
J22	DL02	11862	30.0	1.06	17.8	12.1	0.0026 U	0.0026 UJ	8.3
K22	DL02	11846	24.0	< 0.03		12.15			
K22	DL02	11847	25.0	0.23		12.04			
K22	DL02	11848	26.0	0.28		9.27			
K22	DL02	11849	27.0	< 0.04		6.00			
K22	DL02	11850	28.0	0.13		7.92			
K22	DL02	11851	29.0	0.25		10.62			
K22	DL02	11873	30.0	0.15	6.64	6.79	0.0026 U	0.0026 UJ	54.3
I21	DL03	12111	25.0	0.05		0.97			
I21	DL03	12112	26.0	0.62		8.19			
I21	DL03	12113	27.0	0.74		< 4.06			
I21	DL03	12114	28.0	0.51		4.29			
I21	DL03	12115	29.0	1.61		9.32			
I21	DL03	12116	30.0	0.53	6.18	5.80	0.0026 U	0.0026 U	5.3
I22	DL03	11810	24.0	0.25		< 2.60			
I22	DL03	11811	25.0	0.27		5.15 J			
I22	DL03	11812	26.0	0.39		< 4.18			
I22	DL03	11813	27.0	0.30		5.55			
I22	DL03	11818	28.0	0.29		6.72 J			
I22	DL03	11819	29.0	0.43	9.27	6.83			
J19	DL03	12249	17.0	0.20		< 2.59			
J19	DL03	12250	18.0	0.16		4.84 J			
J19	DL03	12251	19.0	0.28		< 4.16			
J19	DL03	12252	20.0	0.20		< 2.67			
J19	DL03	12253	21.0	0.31 J		< 3.15			
J19	DL03	12254	22.0	0.24		< 2.45			
J19	DL03	12259	23.0	0.17		< 2.75			
J19	DL03	12261	24.0	0.18		< 2.44			
J19	DL03	12262	25.0	0.24		7.25			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	TH-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
J19	DL03	12272	26.0	0.17		< 2.14			
J19	DL03	12275	27.0	0.21 J	0.19 J	0.28 J	0.0026 U	0.00062 J	2.5 J
L22	DL03	11853	22.0	0.22		< 3.41			
L22	DL03	11854	23.0	0.69		14.57			
L22	DL03	11855	24.0	0.17 J		4.17			
L22	DL03	11856	25.0	0.23		4.61 J			
L22	DL03	11858	26.0	0.28		< 3.52			
L22	DL03	11859	27.0	0.24		3.55			
L22	DL03	11860	28.0	0.19		< 4.56			
L22	DL03	11861	29.0	0.24		< 3.40			
L22	DL03	11872	30.0	0.12 U	3.37	3.64	0.0026 U	0.0026 UJ	1.9 J
J19	DL04	12220	17.0	0.22 J		< 2.52			
J19	DL04	12221	18.0	0.17		< 2.41			
J19	DL04	12222	19.0	0.17 J		< 2.78			
J19	DL04	12223	20.0	0.03 UJ		< 2.64			
J19	DL04	12224	21.0	0.21		< 3.11			
J19	DL04	12225	22.0	0.29		< 3.75			
J19	DL04	12240	23.0	0.20 J		< 2.31			
J19	DL04	12241	24.0	0.18 J		< 2.24			
J19	DL04	12242	25.0	0.19		< 2.76			
J19	DL04	12245	26.0	0.18		< 3.42			
J19	DL04	12246	27.0	0.19 J	0.64	0.43	0.0026 U	0.00087 J	1.2 J
K19	DL05	12181	16.0	< 0.05		5.03 J			
K19	DL05	12182	17.0	0.19		< 3.04			
K19	DL05	12183	18.0	0.18		< 2.45			
K19	DL05	12184	19.0	< 0.05		6.16			
K19	DL05	12185	20.0	0.19		< 2.92			
K19	DL05	12186	21.0	0.23		< 3.04			
K19	DL05	12194	22.0	0.17		< 2.43			
K19	DL05	12205	23.0	0.20		< 2.94			
K19	DL05	12206	24.0	< 0.02		< 3.34			
K19	DL05	12207	25.0	0.28 J		3.94 J			
K19	DL05	12208	26.0	0.34		< 2.76			
K19	DL05	12217	27.0	0.085 J	0.52	0.42	0.0026 U	0.0026 U	2.8 J
K19	DL06	12155	16.0	0.20		< 2.64			
K19	DL06	12156	17.0	0.20		< 3.30			
K19	DL06	12157	18.0	0.20		4.28 J			
K19	DL06	12158	19.0	0.25		4.03 J			
K19	DL06	12159	20.0	0.28		< 3.11			
K19	DL06	12164	21.0	0.18		< 2.70			
K19	DL06	12165	22.0	0.26		< 3.07			
K19	DL06	12170	23.0	0.20		< 2.48			
K19	DL06	12171	24.0	0.23		< 2.38			
K19	DL06	12178	25.0	0.16		< 2.14			
K19	DL06	12179	26.0	0.14		< 2.62			
K19	DL06	12180	27.0	0.16 J	0.24 J	0.30 J	0.0027 U	0.00070 J	1.6 J
K19	DL07	12120	15.0	0.23		2.67			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	TU-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
K19	DL07	12121	16.0	0.22		< 2.96			
K19	DL07	12122	17.0	< 0.02		3.04 J			
K19	DL07	12123	18.0	0.15		< 3.23			
K19	DL07	12124	19.0	0.22		4.28 J			
K19	DL07	12125	20.0	0.19		< 3.34			
K19	DL07	12126	21.0	0.20		< 2.67			
K19	DL07	12127	22.0	0.30		< 3.01			
K19	DL07	12128	23.0	0.22		< 2.57			
K19	DL07	12136	24.0	0.18		2.53 J			
K19	DL07	12137	25.0	0.22		< 2.71			
K19	DL07	12153	26.0	0.19		< 3.27			
K19	DL07	12154	27.0	0.19 J	0.27 J	0.43	0.0028 U	0.0028 U	0.84 J
L19	DL08	12076	14.0	0.27		< 2.66			
L19	DL08	12077	15.0	< 0.03		3.25 J			
L19	DL08	12078	16.0	0.32		5.90 J			
L19	DL08	12079	17.0	0.34		6.65 J			
L19	DL08	12080	18.0	0.22		< 3.07			
L19	DL08	12081	19.0	0.18		3.53 J			
L19	DL08	12089	20.0	0.27		< 3.81			
L19	DL08	12090	21.0	< 0.02		9.52			
L19	DL08	12091	22.0	0.22		< 2.62			
L19	DL08	12104	23.0	0.26		5.82 J			
L19	DL08	12105	24.0	0.17		< 1.98			
L19	DL08	12106	25.0	0.20		< 3.09			
L19	DL08	12107	26.0	0.15		6.14			
L19	DL08	12110	27.0	0.123 J	0.25 J	0.16 U	0.0026 U	0.0026 U	1.8 J
L19	DL09	12025	13.0	0.19		3.56 J			
L19	DL09	12026	14.0	0.26		< 3.50			
L19	DL09	12027	15.0	0.33		2.88 J			
L19	DL09	12028	16.0	0.25		< 2.53			
L19	DL09	12029	17.0	0.24		< 2.46			
L19	DL09	12030	18.0	0.29		< 2.97			
L19	DL09	12031	19.0	< 0.06		3.20 UJ			
L19	DL09	12039	20.0	0.20		< 2.34			
L19	DL09	12040	21.0	0.26		< 3.27			
L19	DL09	12041	22.0	0.20		< 3.12			
L19	DL09	12063	23.0	0.18 J		< 2.49			
L19	DL09	12072	24.0	0.26		< 3.37			
L19	DL09	12073	25.0	0.24		< 3.45			
L19	DL09	12074	26.0	0.21		< 3.09			
L19	DL09	12075	27.0	0.10 J	0.25 J	0.19 U	0.0026 U	0.0026 U	1.6 J
M19	DL10	11984	12.0	0.21		3.06 UJ			
M19	DL10	11985	13.0	0.29		3.38 UJ			
M19	DL10	11986	14.0	0.13		< 3.38			
M19	DL10	11987	15.0	0.22		3.96 J			
M19	DL10	11988	16.0	0.25		< 2.50			
M19	DL10	11998	17.0	0.18		< 2.60			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
M19	DL10	11999	18.0	0.24		< 2.24			
M19	DL10	12000	19.0	0.20		2.99 UJ			
M19	DL10	12001	20.0	0.26		4.51 J			
M19	DL10	12013	21.0	0.27		11.09 J			
M19	DL10	12014	22.0	0.21		3.66 J			
M19	DL10	12032	23.0	0.24		< 2.67			
M19	DL10	12044	24.0	0.11		< 1.90			
M19	DL10	12045	25.0	0.09		< 2.78			
M19	DL10	12046	26.0	0.22		< 3.82			
M19	DL10	12060	27.0	0.14 U	0.32 J	0.13 U	0.0026 U	0.0026 U	1.3 J
I20	DL11	12314	20.0	0.47		5.55			
I20	DL11	12315	21.0	0.43		< 3.15			
I20	DL11	12323	22.0	0.06 UJ		2.75			
I20	DL11	12324	23.0	0.33		7.16			
I20	DL11	12325	24.0	0.28		< 4.11			
I20	DL11	12326	25.0	0.22		< 3.04			
I20	DL11	12327	26.0	0.43		< 2.18			
I20	DL11	12328	27.0	0.28 J	2.98	2.00	0.0026 U	0.0026 UJ	33.7
I20	DL12	12226	20.0	0.22		< 2.75			
I20	DL12	12228	21.0	0.17 J		< 2.44			
I20	DL12	12229	22.0	0.21		< 4.01			
I20	DL12	12230	23.0	< 0.05		5.89			
I20	DL12	12233	24.0	0.25		< 2.83			
I20	DL12	12234	25.0	0.17 J		< 2.86			
I20	DL12	12243	26.0	0.17 J		< 2.88			
I20	DL12	12244	27.0	0.19 J	0.58	0.58	0.0026 U	0.0026 U	1.7 J
J20	DL13	12197	20.0	0.17		5.20 J			
J20	DL13	12198	21.0	0.15		4.46 J			
J20	DL13	12202	22.0	0.21		< 3.21			
J20	DL13	12203	23.0	0.33		< 3.47			
J20	DL13	12212	24.0	0.17 J		< 2.63			
J20	DL13	12213	25.0	0.19		< 3.42			
J20	DL13	12214	26.0	0.19		< 2.62			
J20	DL13	12215	27.0	0.15 U	0.35 J	0.19 U	0.0025 U	0.0025 U	0.59 J
J20	DL14	12187	19.0	0.22		< 3.58			
J20	DL14	12188	20.0	0.19		< 2.66			
J20	DL14	12189	21.0	0.23		< 3.07			
J20	DL14	12190	22.0	0.20		< 2.85			
J20	DL14	12191	23.0	0.18		< 3.37			
J20	DL14	12192	24.0	0.20		< 2.31			
J20	DL14	12195	25.0	0.22		3.57 J			
J20	DL14	12196	26.0	< 0.04		5.50			
J20	DL14	12201	27.0	0.14 U	0.59	0.65	0.0026 U	0.0026 U	0.84 J
K20	DL15	12160	19.0	0.16		< 3.21			
K20	DL15	12161	20.0	0.25		< 2.76			
K20	DL15	12162	21.0	0.19		< 2.36			
K20	DL15	12163	22.0	0.27		< 2.41			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
K20	DL15	12173	23.0	0.26		3.48 J			
K20	DL15	12174	24.0	0.19		< 2.83			
K20	DL15	12175	25.0	0.24		< 3.14			
K20	DL15	12176	26.0	0.24		2.80 J			
K20	DL15	12177	27.0	0.24 J	0.35 J	0.41	0.0026 U	0.0026 U	4.7
K20	DL16	12140	19.0	0.23		< 3.43			
K20	DL16	12141	20.0	0.26		< 3.63			
K20	DL16	12146	21.0	0.24		< 2.67			
K20	DL16	12147	22.0	0.25		< 3.45			
K20	DL16	12148	23.0	0.24		< 2.98			
K20	DL16	12149	24.0	0.17		3.16 J			
K20	DL16	12150	25.0	0.21		< 3.78			
K20	DL16	12151	26.0	0.12		4.29			
K20	DL16	12152	27.0	0.2 U	0.31 J	0.26 J	0.0026 U	0.0026 U	3.1 J
K20	DL17	12098	18.0	0.23		6.52			
K20	DL17	12099	19.0	0.20		< 2.06			
K20	DL17	12108	20.0	0.15		< 2.30			
K20	DL17	12109	21.0	0.21		< 3.02			
K20	DL17	12117	22.0	< 0.02		< 3.31			
K20	DL17	12118	23.0	0.18		< 1.81			
K20	DL17	12129	24.0	0.16		< 2.51			
K20	DL17	12130	25.0	< 0.04		3.53 J			
K20	DL17	12134	26.0	0.18		< 3.16			
K20	DL17	12135	27.0	0.19 U	0.50	0.58	0.0026 U	0.00039 J	0.99 J
L20	DL18	12066	16.0	0.19		7.95			
L20	DL18	12067	17.0	0.32		< 2.99			
L20	DL18	12068	18.0	< 0.02		< 2.81			
L20	DL18	12069	19.0	0.23		< 2.55			
L20	DL18	12070	20.0	0.16		< 2.49			
L20	DL18	12071	21.0	0.26		< 2.94			
L20	DL18	12082	22.0	0.18		< 2.94			
L20	DL18	12083	23.0	0.28		< 2.79			
L20	DL18	12093	24.0	0.27		< 3.51			
L20	DL18	12094	25.0	0.16		< 2.65			
L20	DL18	12095	26.0	0.16		< 2.42			
L20	DL18	12096	27.0	0.25 J	0.17 U	0.27 J	0.0026 U	0.0026 U	1.0 J
L20	DL19	12047	15.0	0.20		< 2.30			
L20	DL19	12048	16.0	0.25		< 2.57			
L20	DL19	12050	17.0	< 0.06		< 6.95			
L20	DL19	12051	18.0	0.20		< 2.19			
L20	DL19	12052	19.0	0.14 J		< 2.05			
L20	DL19	12054	20.0	< 0.03		7.04 J			
L20	DL19	12055	21.0	0.22		< 2.29			
L20	DL19	12056	22.0	0.14		< 2.13			
L20	DL19	12057	23.0	0.19		< 2.57			
L20	DL19	12058	24.0	0.21		< 3.22			
L20	DL19	12059	25.0	0.19		< 2.58			

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
L20	DL19	12062	26.0	0.17		< 4.39			
L20	DL19	12061	27.0	0.17 J	0.23 U	0.20 U	0.0026 U	0.0026 U	2.8 J
M20	DL20	12005	14.0	0.21		2.55 J			
M20	DL20	12006	15.0	0.20		< 3.31			
M20	DL20	12007	16.0	0.19		< 2.45			
M20	DL20	12010	17.0	0.20		2.62 UJ			
M20	DL20	12011	18.0	< 0.05		4.23 J			
M20	DL20	12012	19.0	0.18		5.23 J			
M20	DL20	12015	20.0	0.24		6.38			
M20	DL20	12016	21.0	0.14		< 2.94			
M20	DL20	12020	22.0	< 0.02		3.01 UJ			
M20	DL20	12021	23.0	0.19		< 2.69			
M20	DL20	12022	24.0	0.10		2.52 J			
M20	DL20	12023	25.0	0.21		< 3.74			
M20	DL20	12024	26.0	0.35		< 2.85			
M20	DL20	12033	27.0	0.15 J	0.18 J	0.22 J	0.0026 U	0.0026 U	1.5 J

**Cell 10-Table 5
Systematic Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

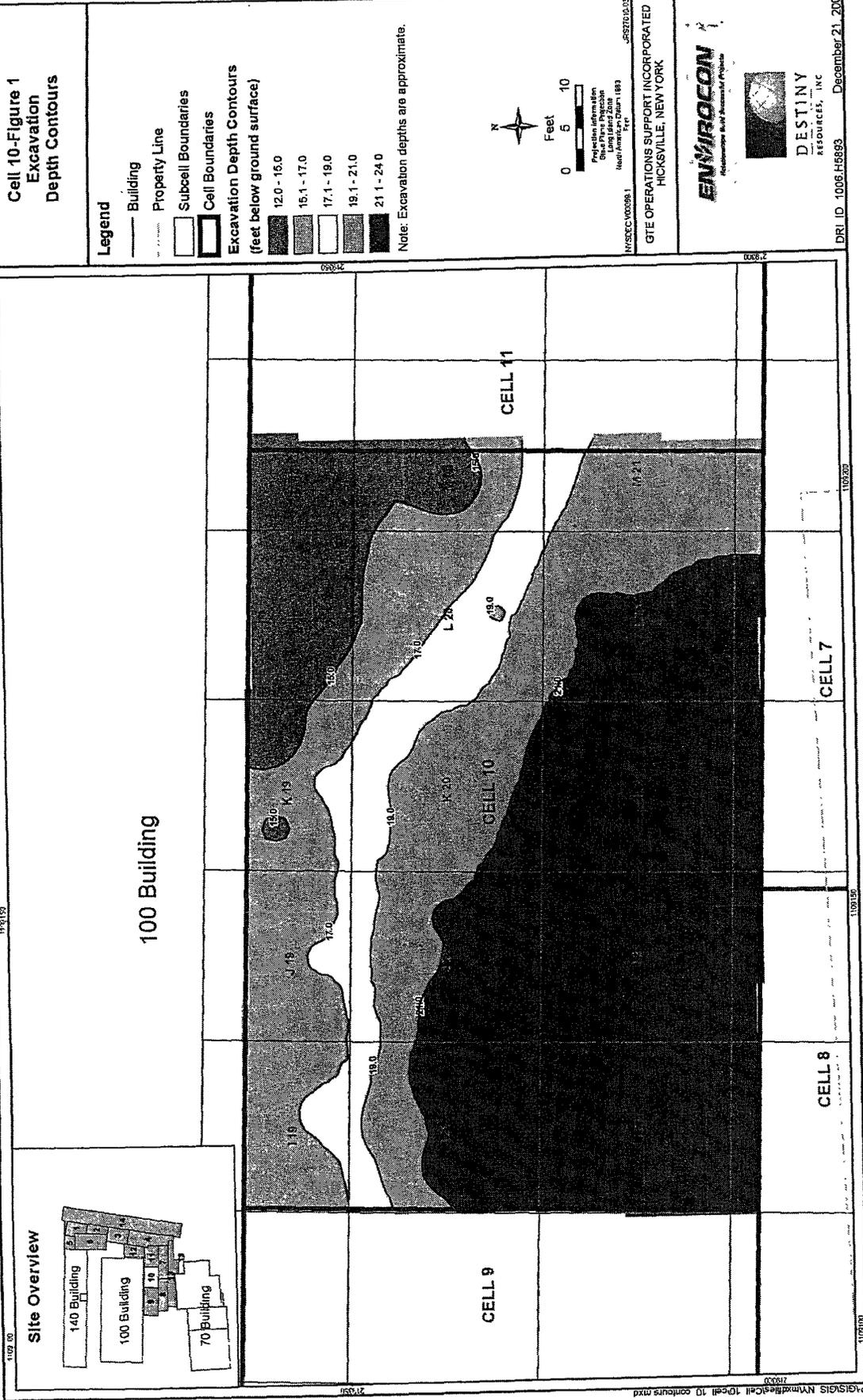
See Cell 10-Figure 6 for boring locations.

DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.

SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.



**Cell 10-Figure 1
Excavation
Depth Contours**

- Legend**
- Building
 - Property Line
 - Subcell Boundaries
 - Cell Boundaries
- Excavation Depth Contours
(feet below ground surface)**
- 12.0 - 15.0
 - 15.1 - 17.0
 - 17.1 - 19.0
 - 19.1 - 21.0
 - 21.1 - 24.0

Note: Excavation depths are approximate.



Feet
0 5 10

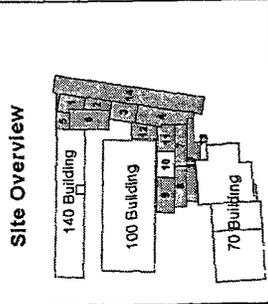
Projection Information
State Plane System
North American Datum 1983
NAD83
GSE210-0-037

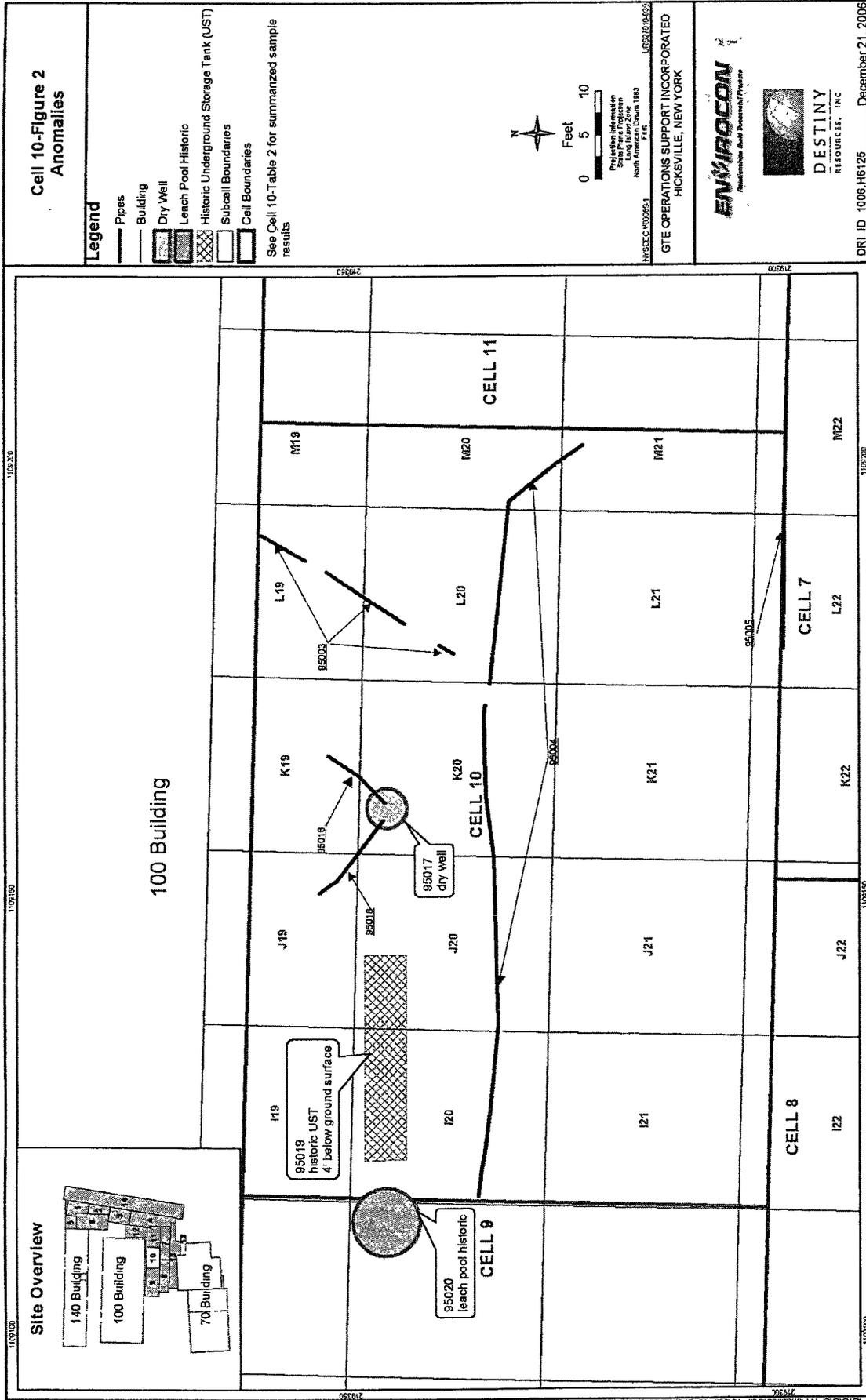
NYSDCORP
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DESTINY
RESOURCES, INC

DRI ID: 1006.H-5893 December 21, 2006





Cell 10-Figure 3
Post-Excavation
Gamma Radiation
Walkover Survey Results

Legend

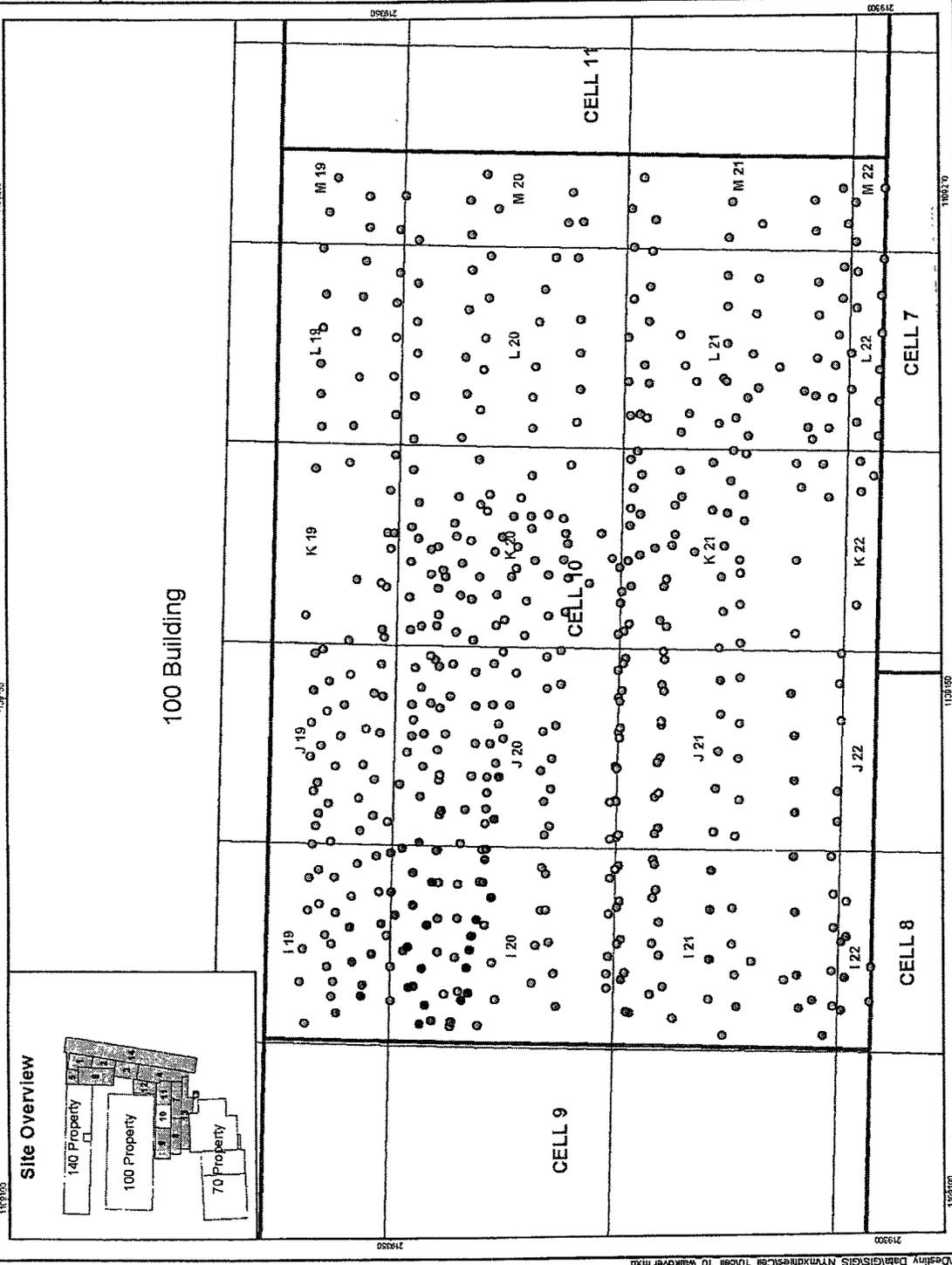
- Lower Population - 71% of data (0 - 4320 cpm)
- Middle Population - 21% of data (4321 - 5370 cpm)
- High Level Population - 8% of data (5371 - 12000 cpm)

Building
 Property Line
 Subcell Boundaries
 Cell Boundaries

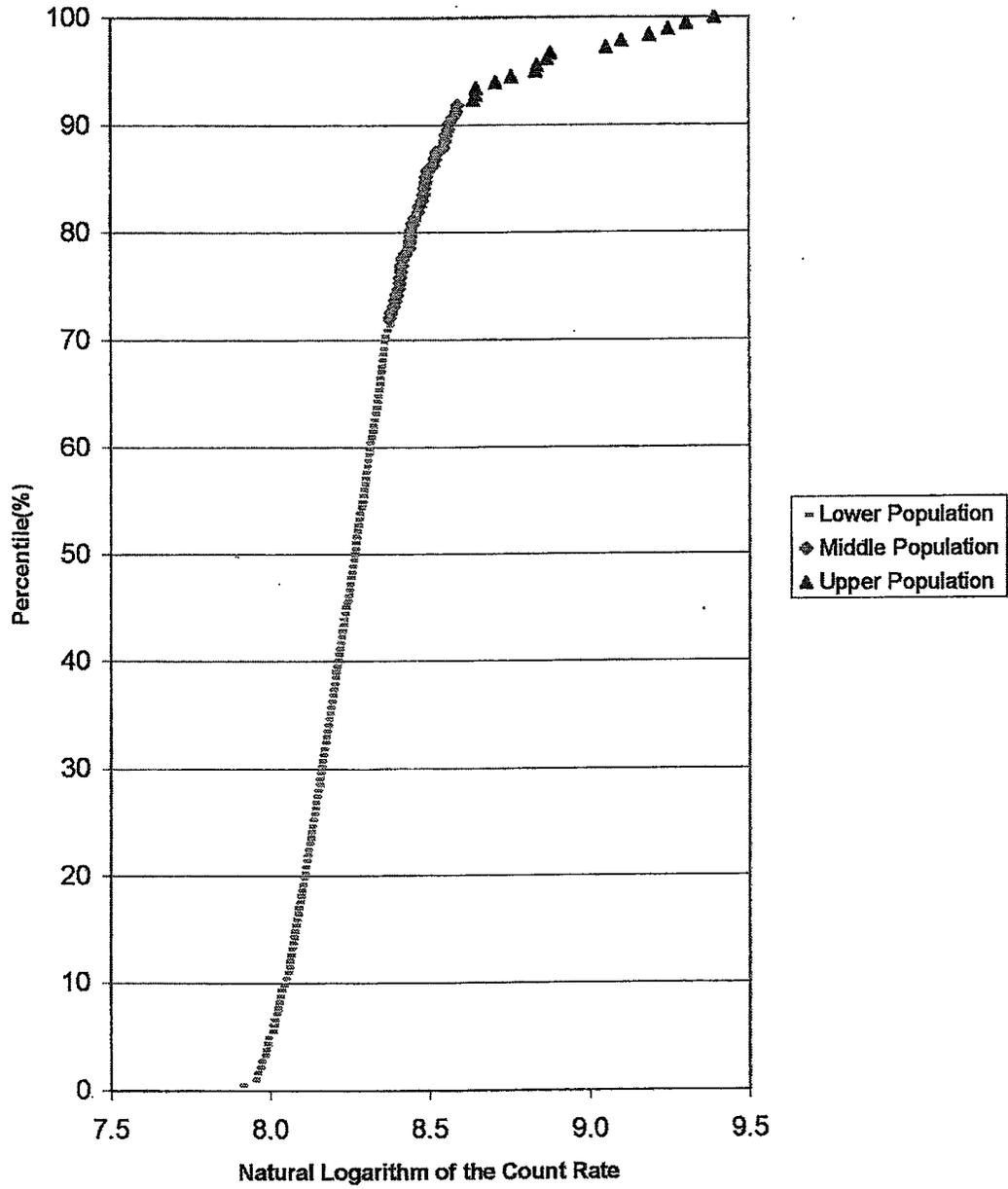
N
 Feet
 0 5 10
 Projection Information
 Site Plane Projection
 North American Datum 1983
 Feet
 URS20101032

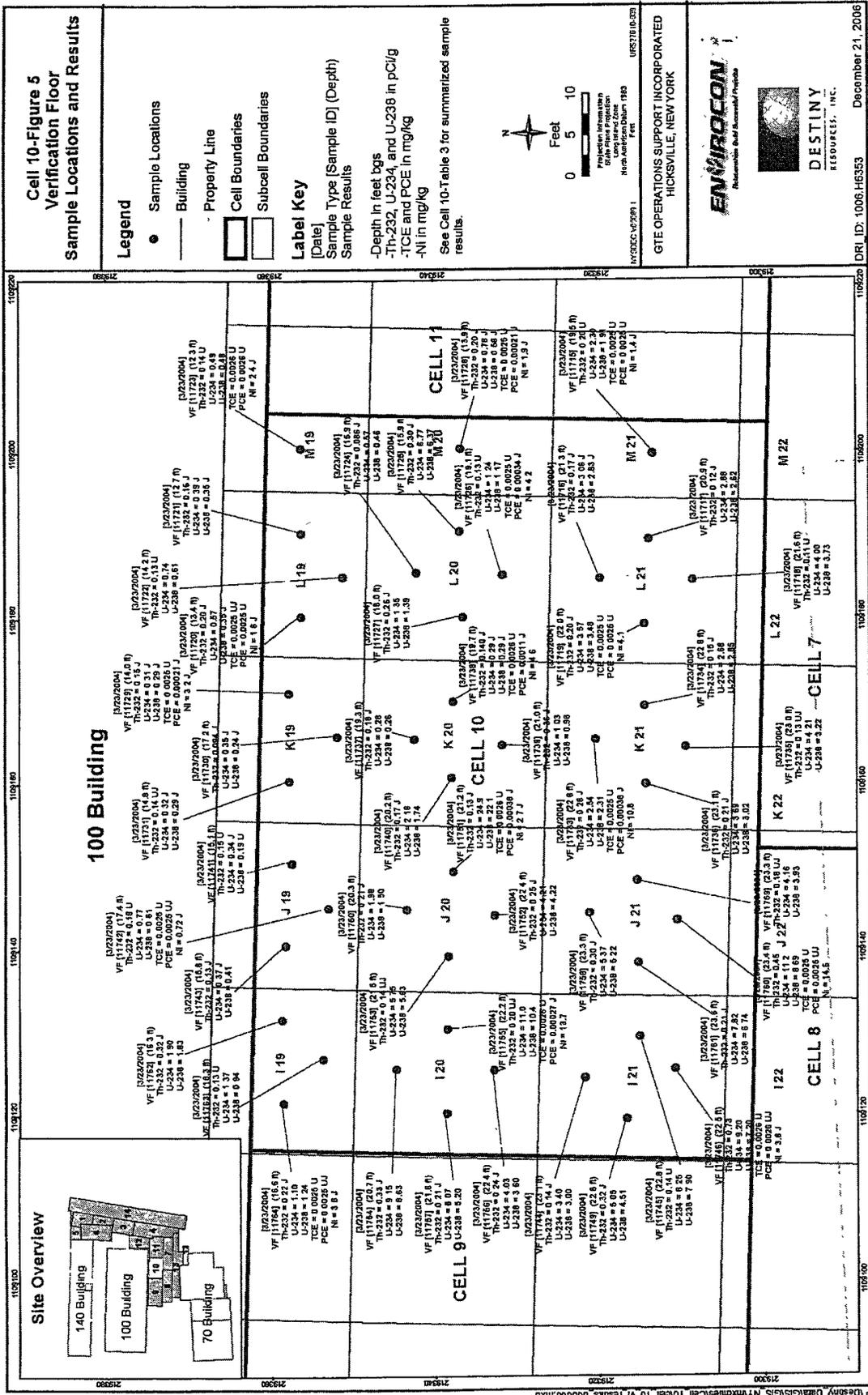
ENVIROCON
 Membership and Technical Practice
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

DESTINY
 RESOURCES, INC.
 DRI ID: 1006.H5886 December 21, 2006



Cell 10-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data





**Cell 10-Figure 5
Verification Floor
Sample Locations and Results**

- Legend**
- Sample Locations
 - ▭ Building
 - ▭ Property Line
 - ▭ Cell Boundaries
 - ▭ Subcell Boundaries

Label Key

(Date)
Sample Type (Sample ID) (Depth)
Sample Results

-Depth in feet bgs
-Th-232, U-234, and U-238 in pCi/g
-TCE and PCE in mg/kg
-NI in mg/kg

See Cell 10-Table 3 for summarized sample results.



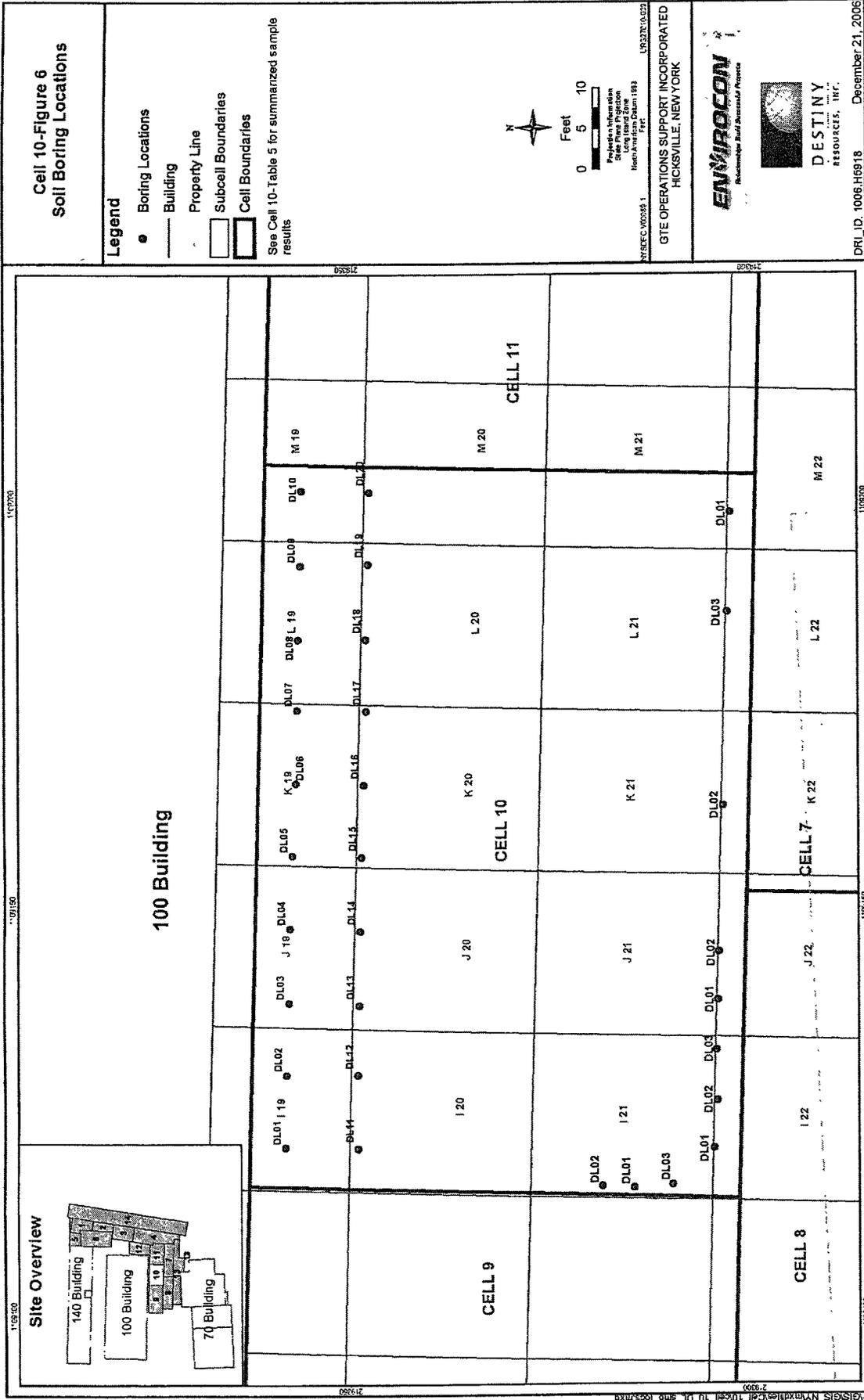
NYDEC-V52691
UR5701032E

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



DRI ID: 1006.H6353 December 21, 2006

P:\Destiny_Data\GIS\NYM\Cell10_VF_Results_080806.mxd





"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc:
Subject: Cells 5,10,11 and Cell 12 units O18,19, P18, P19, Q18, Q19

05/12/2004 03:54 PM

We have conducted walkover surveys of Cells 5,10,11,12 (units O,P, and Q 18-19) and reviewed the CF/VF sample data including the DL samples from the subsurface soil boreholes. We agree that these results are below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore we have no objection to backfilling these cells. Upon receipt and review of your data packages for these cells and receipt of the sample results from our contract lab, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003498

New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

January 5, 2004

Jean Agostinelli
GTE Operations Support, Inc.
170 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard, December 20, 2003
Former Sylvania Electric Products Facility, Site # V00089-1

Dear Ms. Agostinelli:

The Department has reviewed the December 20, 2003 report concerning the borrow soils from the Spagnoli Road area. Based on the data in this report, the Department finds these soils to be acceptable for use as backfill at the Former Sylvania Electric Products Facility site in Hicksville.

If you have any questions, please call me at (631) 444-0244.

Sincerely,

Robert R. Stewart
Environmental Engineer I
Environmental Engineer I

cc: W. Parish
J. Riggi

Attachment B
Page 1 of 2

GTES0003499



April 1, 2004

Jean Agostinelli, Project Manager
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Report, Spagnoli Road (SPAG2), March 24, 2004
Former Sylvania Electric Products Facility (FSEPF), #V00089-1

Dear Ms. Agostinelli:

I have read the Borrow Soils Report for Spagnoli Road dated March 24, 2004. Based on the results of your samples, the Department has no objections to you using these soils for backfill at the FSEPF site.

I have identified what I believe to be a typographical error in the notes for Table 4 (PCB results). In regard to the results by the Method 8082, it is stated, "Results reported in mg/kg or parts per billion (ppb)." Mg/kg should instead be " μ g/kg". If I am incorrect, please notify me.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi
J. Nealon, NYSDOH

Attachment B
Page 2 of 2

Cell 10 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 10, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 10 consists of all or portions of subcells I19 to M19, I20 to M20, I21 to M21, and I22 to M22. (Since less than 25 percent of subcells I22 to M22 are in Cell 10, the portions of these subcells that are north of the sheet pile wall are considered part of subcells I21 to M21, respectively, for purposes of this evaluation.) The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 10 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 47 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 47 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 10, (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 47 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 11 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 11) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.21. As is explained in Section 10.1.1, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 10

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
11762	0.32 J	1.9	1.83
11763	0.13 U	1.37	0.94
11764	0.22 J	1.1	1.24
11754	0.33 J	9.15	8.63
11755	0.2 UJ	11	10.4
11756	0.24 J	4.03	3.6
11757	0.21 J	6.07	5.2
11744	0.14 J	3.4	3
11745	0.14 U	8.25	7.9
11746	0.73	9.2	7.2
11749	0.32 J	5.05	4.51
11741	0.15 U	0.34 J	0.19 U
11742	0.18 U	0.77	0.61
11743	0.13 J	0.37 J	0.41
11750	0.21 J	1.98	1.5
11751	0.13 J	24.9	22.1
11752	0.25 J	4.21	4.22
11753	0.14 UJ	5.75	5.63
11758	0.3 J	5.37	5.22
11759	0.18 UJ	4.16	3.93
11760	0.45	11.2	8.69
11761	0.21 J	7.82	6.74
11729	0.15 J	0.31 J	0.29 J
11730	0.094 J	0.35 J	0.24 J
11731	0.14 UJ	0.32 J	0.29 J
11737	0.18 J	0.28	0.26
11738	0.14 J	0.29 J	0.29 J
11739	0.36 J	1.03	0.98
11740	0.17 J	2.16	1.74
11733	0.28 J	2.54	2.31
11734	0.15 J	2.68	2.85
11735	0.13 UJ	4.21	3.22
11736	0.21 J	3.69	3.02
11721	0.16 J	0.39 J	0.35 J
11722	0.13 U	0.74	0.61
11720	0.2 J	0.57	0.35 J
11724	0.086 J	0.57	0.46
11725	0.3 J	6.77	6.37
11726	0.13 U	1.24	1.17
11727	0.26 J	1.35	1.39
11716	0.17 J	3.06 J	2.83 J
11717	0.12 J	2.88	2.62
11718	0.11 U	4	3.73
11719	0.2 J	3.57	3.48

Table C.1

Cell 10

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
11723	0.14 U	0.49	0.48
11728	0.2 J	0.78 J	0.58 J
11715	0.2 U	2.3	1.91

Notes:

Cell area = 513 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

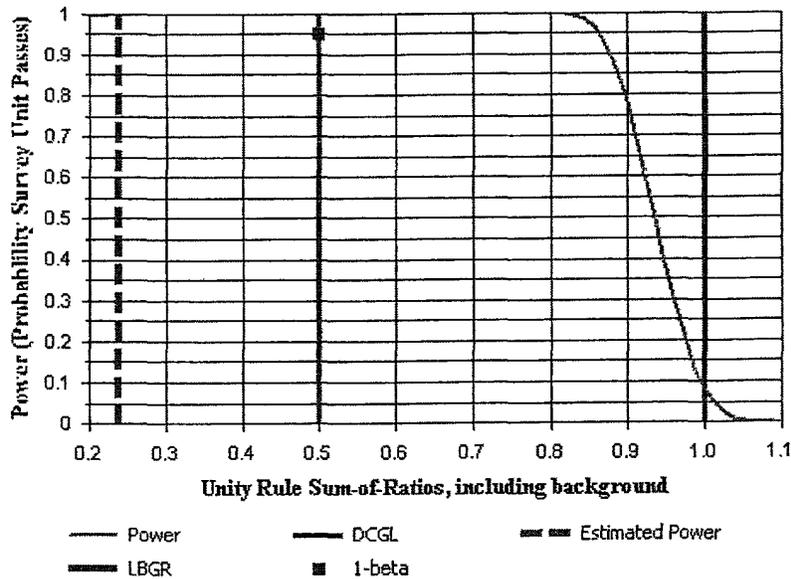


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 10 with STL Data		
Comments:			
Area (m ²):	513	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.13
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.24
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.25 \pm 0.15	N/A
U-234	4 \pm 4.5	N/A
U-238	3.5 \pm 4	N/A

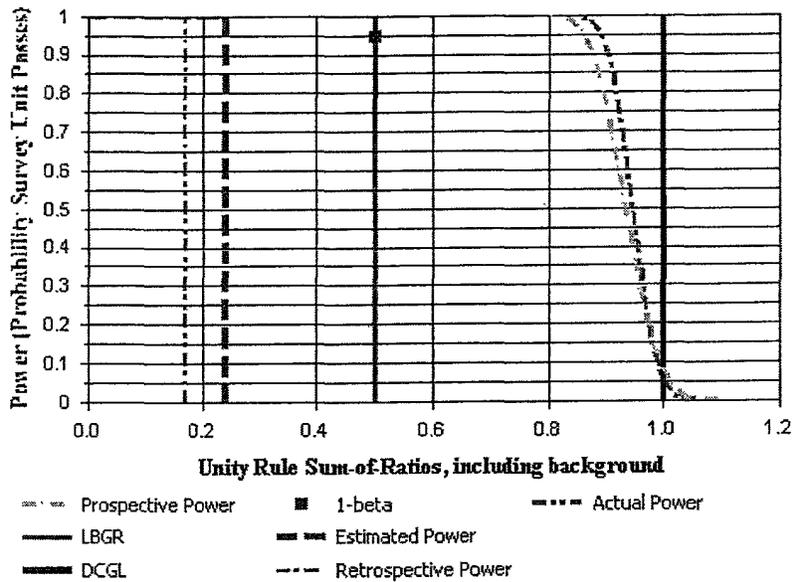


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 10 with STL Data
Report Number: 1
Survey Unit Samples: 47
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
11762	S	0.32	1.9	1.83
11763	S	0.13	1.37	0.94
11764	S	0.22	1.1	1.24
11754	S	0.33	9.15	8.63
11755	S	0.2	11	10.4
11756	S	0.24	4.03	3.6
11757	S	0.21	6.07	5.2
11744	S	0.14	3.4	3
11745	S	0.14	8.25	7.9
11746	S	0.73	9.2	7.2
11749	S	0.32	5.05	4.51
11741	S	0.15	0.34	0.19
11742	S	0.18	0.77	0.61
11743	S	0.13	0.37	0.41
11750	S	0.21	1.98	1.5
11751	S	0.13	24.9	22.1
11752	S	0.25	4.21	4.22
11753	S	0.14	5.75	5.63
11758	S	0.3	5.37	5.22
11759	S	0.18	4.16	3.93
11760	S	0.45	11.2	8.69
11761	S	0.21	7.82	6.74
11729	S	0.15	0.31	0.29
11730	S	0.09	0.35	0.24
11731	S	0.14	0.32	0.29
11737	S	0.18	0.28	0.26
11738	S	0.14	0.29	0.29
11739	S	0.36	1.03	0.98
11740	S	0.17	2.16	1.74
11733	S	0.28	2.54	2.31
11734	S	0.15	2.68	2.85
11735	S	0.13	4.21	3.22
11736	S	0.21	3.69	3.02
11721	S	0.16	0.39	0.35
11722	S	0.13	0.74	0.61
11720	S	0.2	0.57	0.35
11724	S	0.09	0.57	0.46
11725	S	0.3	6.77	6.37
11726	S	0.13	1.24	1.17
11727	S	0.26	1.35	1.39
11716	S	0.17	3.06	2.83
11717	S	0.12	2.88	2.62
11718	S	0.11	4	3.73
11719	S	0.2	3.57	3.48
11723	S	0.14	0.49	0.48
11728	S	0.2	0.78	0.58
11715	S	0.2	2.3	1.91



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
11762	S	0.19
11763	S	0.09
11764	S	0.13
11754	S	0.47
11755	S	0.5
11756	S	0.24
11757	S	0.3
11744	S	0.18
11745	S	0.37
11746	S	0.59
11749	S	0.31
11741	S	0.06
11742	S	0.09
11743	S	0.06
11750	S	0.14
11751	S	0.99
11752	S	0.26
11753	S	0.28
11758	S	0.32
11759	S	0.23
11760	S	0.56
11761	S	0.37
11729	S	0.07
11730	S	0.05
11731	S	0.06
11737	S	0.08
11738	S	0.06
11739	S	0.17
11740	S	0.14
11733	S	0.2
11734	S	0.16
11735	S	0.2
11736	S	0.21
11721	S	0.07
11722	S	0.07
11720	S	0.09
11724	S	0.05
11725	S	0.37
11726	S	0.09
11727	S	0.15
11716	S	0.18
11717	S	0.15
11718	S	0.19
11719	S	0.21
11723	S	0.07
11728	S	0.1
11715	S	0.16



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	47	N/A	N=13
Mean (SOR)	0.21	N/A	0.24
Median (SOR)	0.17	N/A	N/A
Std Dev (SOR)	0.18	N/A	0.13
High Value (SOR)	0.99	N/A	N/A
Low Value (SOR)	0.05	N/A	N/A

Cell 11 Status Report

INTRODUCTION

Cell 11 is comprised of all or portions of subcells M19 to Q19, M20 to Q20, M21 to Q21, and M22 to Q22. Cell 11 is adjacent to the southeast corner of the 100 Building (Cell 11-Figure 1 and Figure 6 in Volume I). Excavation of Cell 11 began on October 21, 2003 and was completed on February 5, 2004. Verbal approval to backfill Cell 11 was received from NYSDEC representatives on February 11, 2004 and documented in an e-mail on May 12, 2004 (Cell 11-Attachment A). A formal request to backfill Cell 11 was submitted in a report to NYSDEC titled *Cell 11 – Attainment of Radiological and Chemical Clean-up Levels* dated April 22, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 11 was backfilled beginning February 16, 2004 and was initially backfilled to 16 ft bgs to support the systematic soil sampling discussed later in this report. After the systematic soil sampling was completed, backfilling was resumed and was completed on March 29, 2004. The soils used for backfill came from the Spagnoli Road in Melville, New York. Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling – Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard*, dated December 20, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated January 5, 2004 (Cell 11-Attachment B).

DEPTHS OF EXCAVATION

Cell 11 was excavated to depths ranging from approximately 16 to 36 ft bgs. The excavation depths for each subcell are provided in Cell 11-Table 1 and are shown on Cell 11-Figure 1. (See Section 6.2.4 of the Volume I for a description of how the excavation depths are determined.) A total of 17,308,660 pounds of soil and debris (812 Lift Liners™) were removed from Cell 11 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 11, various anomalies were encountered. The anomalies were primarily pipes, drum remnants, and concrete from a drywell and a silver-colored metal tube filled with a powdery material. A list of Cell 11 anomalies along with analytical results from anomaly samples is provided in Cell 11-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 11-Figure 2. The tube that was uncovered in subcell N21 was shipped to BWX Technologies Services, Inc.'s Nuclear Environmental Laboratory in Lynchburg, Virginia for analysis of the tube and its contents. Based on the results of the off-Site laboratory analyses, the contents of the tube were depleted uranium [uranium dioxide (UO₂) and uranium trioxide (UO₃)]. The tube was a stainless steel-type alloy. A detailed discussion of the analytical results for this tube and its contents is provided in a report

titled *Cell 11: Analytical Results of the Tube* issued to NYSDEC on March 18, 2004. All of the other anomalies encountered during the excavation activities in Cell 11 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 11, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as can be seen on Cell 11-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 11-Figure 4 depicts a CFD plot of the 1226 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 11-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluation are provided in Cell 11-Attachment C. The confirmation that chemical cleanup levels had been attained is accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 of Volume I) with the exceptions given below:

- N21 – The A, B, and C samples;
- O21 – The A, B, C, and D samples; and
- P21 – The A, C, and D samples.

These locations were inaccessible for VF sampling as they were in areas that were required to be immediately backfilled to 27 ft bgs following trenching due to engineering requirements. The trenches in N21, O21, and P21 were extended from the excavation floor (at approximately 27 ft bgs) to final depths that ranged from 31 to 36 ft bgs. Since VF samples could not be collected from these ten sample locations in the three subcells, DL and SP samples were identified that best represented the location of the associated A, B, C or D floor samples. The use of these DL and SP samples to represent the VF samples was verbally concurred with by NYSDEC. Since less than 25 percent of subcells M22 to Q22 are in Cell 11, the portions of these subcells north of

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

the sheet pile wall are considered part of subcells M21 to Q21, respectively, for sampling purposes.

For chemical analysis purposes, one VF sample was collected from each subcell based on the highest PID reading, except for subcells N21, O21 and P21 (as described above). To maintain sampling consistency of one VOC sample per subcell at final excavation depth, the SP sample results from N21 and P21 were used in lieu of VF samples provided VOC results. A chemical sample was not collected for subcell O21.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

Concentrations of Th-232 greater than the ALARA level (See Section 3.0 of Volume I) but less than the cleanup level (based on on-Site analyses) were encountered in subcells N21, N22, O21, O22, P21, and P22 at the maximum engineered excavation depth of 27 ft. To comply with the Th-232 ALARA level, and with the Shoring Engineer's approval, another 4 to 9 ft of excavation was conducted in portions of these subcells. Concentrations of Th-232 greater than the ALARA level but less than the cleanup level were still present on the excavated floor at depths of 31 to 36 ft bgs. Focused soil sampling was then performed using hand augers to determine if concentrations of Th-232 greater than the cleanup level were present in soil greater than 36 ft bgs (Cell 11-Figure 6).

Focused soil sampling was also performed using hand augers along the eastern portion of the northern sheet pile wall in subcells O19, P19 and Q19 (Cell 11-Figure 6). These samples were collected to confirm that there were no concentrations greater than the cleanup level present along the north sheet pile wall.

A total of 49 soil borings were completed and a total of 524 samples were collected in subcells O19, P19, Q19, O20, N21, O21, P21, N22, O22, and P22. The sample results for both radiological and chemical contaminants were used to delineate the vertical and horizontal extent of remaining impacts in that area. Sample results from below the design engineering limits are presented in Cell 11-Table 5 and indicate that some constituents are above the cleanup level.

SYSTEMATIC SOIL SAMPLING

The maximum-engineered excavation depth along the western half of the north sheet pile wall (subcells M19, N19, O19, and P19) was 16 ft bgs. The area south of this section of wall (subcells M20, N20, O20, and P20) was sloped from 16 to approximately 27 ft bgs. Surface soil samples on the sloped section were collected and analyzed as part of the VF sampling. Since elevated concentrations were identified at depths below 27 ft bgs in adjacent areas, soil borings were used to confirm that soils from the excavated depths (16 to 27 ft bgs) to a final depth of 40 ft bgs are

below cleanup levels. A systematic sampling of the undisturbed soils was performed using a hollow-stem auger drill rig and a split spoon sampler. Portions of Cell 11 were backfilled to a depth of 16 ft bgs prior to performing the systematic sampling to allow access.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 11-Table 3 and are shown on Cell 11-Figure 5. Cell 11-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF samples. The radiological, PCE, TCE, and nickel results for STL analyses of the focused soil samples are provided in Cell 11-Table 5 and the boring locations are shown on Cell 11-Figure 6. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the systematic soil samples are provided in Cell 11-Table 6 and the boring locations are shown on Cell 11-Figure 7.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 11, passed this evaluation (Cell 11-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Based on STL VF sample results, the radiological and chemical cleanup levels were attained for Cell 11.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 11-Table 1	Cell 11 Subcell Excavation Depths
Cell 11-Table 2:	Cell 11 Anomaly Sample Results
Cell 11-Table 3:	Cell 11 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 11-Table 4:	Cell 11 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 11-Table 5:	Cell 11 Focused Soil Boring Sample Results
Cell 11-Table 6:	Cell 11 Systematic Soil Boring Sample Results

Figures

Cell 11-Figure 1:	Cell 11 Excavation Depth Contours
Cell 11-Figure 2:	Cell 11 Anomalies
Cell 11-Figure 3:	Cell 11 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 11-Figure 4:	Cumulative Frequency Distribution for Cell 11 Gamma Radiation Walkover Survey Data
Cell 11-Figure 5:	Cell 11 Verification Floor Sample Locations and Results
Cell 11-Figure 6:	Cell 11 Focused Soil Boring Locations
Cell 11-Figure 7:	Cell 11 Systematic Soil Boring Locations

Attachments

Cell 11-Attachment A:	E-Mail from NYSDEC to GTEOSI dated May 12, 2004
Cell 11-Attachment B:	Letter from NYSDEC to GTEOSI dated January 5, 2004
Cell 11-Attachment C:	Cell 11 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 11-Table 1
Subcell Excavation Depths**

100 Property		Cell 12			Cell 4
		M19	N19	O19	
	16-19 ft	16-22 ft	16-22 ft	19-22 ft	16-22 ft
Cell 10	M20	N20	O20	P20	Q20
	16-22 ft	16-25 ft	19-25 ft	19-25 ft	16-25 ft
	M21	N21	O21	P21	Q21
	22-28 ft	22-33 ft	22-36 ft	22-32 ft	22-28 ft
	M22	N22	O22	P22	Q22
					Cell 7

- Notes:
 Excavation depths are approximate.
 — Subcell Boundary
 — Cell Boundary
 - - - Building Boundary

Cell 11-Table 2
Anomaly Sample Results

File	10/12/2003	08888	Z-1079	020670	4" (dia)	Tile	2.5	Under Pipe	0.85	N/A	0.93 J	14.08	45,500	31	184	0.127	0.092U	NS	One gamma count rate for samples 00817,00888

Cell 11-Table 2 Anomaly Sample Results

Analyte:	
Th-232 - Thorium-232	TCE - Trichloroethene
U-234 - Uranium-234	PCE - Tetrachloroethene
U-235 - Uranium-235	N - Nickel
U-238 - Uranium-238	
Units:	
pCi/g - picocurie/gram	cpm - counts per minute
mg/gg - milligram/gram	cpm/100 cm ² - disintegrations per minute/100 square centimeters
Qualifiers:	
U - Validation qualifier used to indicate that the result was qualified as non-detect.	
J - Validation qualifier used to indicate that the result is considered an estimate.	
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.	
D - Validation qualifier used to indicate that analysis was performed on a sample requiring dilution.	
s - Validation qualifier (for on-site radiological constituents) used to indicate that the result was qualified as non-detect.	
Notes:	
See Cell 11-Figure 2 for sample locations.	
On-Site sample results are in plain font and include radionuclides (Th-232 and U-238) analyzed by the gamma spectroscopy system, volatile organic compounds (TCE and PCE) by solid phase microextraction and capillary gas chromatography by Stone Environmental, Inc.	
NA - Analysis was not performed.	
NS - Not sampled.	
(STL) - Results are from Severn Trent Laboratories, Inc.	
KDA - Minimum Detectable Activity.	
BLGD - Background.	
Due to an artifact in the laboratory data reporting program, the on-site analytical data should be interpreted to two significant figures.	

Cell 11-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
M19	B	09648	15.9	0.13 J	0.45 J	0.30 J	0.0026 U	0.0013 J	1.2 J
M19	C	09651	16.1	0.12 U	1.78	1.66			
M20	A	09663	17.9	0.26 J	2.08	1.54			
M20	B	09664	18.7	0.53	2.34	1.17			
M20	C	09665	19.4	0.41	2.09	1.65	0.0026 U	0.0031 J	1.1 J
M21	A	09680	24.2	0.080 J	6.65	6.07			
M21	B	09681	25.4	0.18 J	8.82	9.18			
M21	C	09682	24.9	0.25 J	1.06 J	1.60	0.0026 U	0.0026 U	1.0 J
N19	B	09666	17.2	0.25 J	0.63	0.42	0.0025 U	0.0025 U	1.5 J
N19	C	09667	18.4	0.16 J	0.24 J	0.45			
N19	D	09668	16.7	0.14 J	0.21 U	0.39 J			
N20	A	09673	20.6	0.31 J	1.71	1.23			
N20	B	09674	22.3	0.17 U	2.04	2.49			
N20	C	09675	22.1	0.45 J	2.46	1.50			
N20	D	09676	20.6	0.48 J	1.87	1.54	0.0026 U	0.0026 U	1.2 J
N21	A*	08486	32.0	0.76	12.3	1.37	0.0026 U	0.0026 U	1.5 J
N21	B*	08648	31.0	0.66	15.7	2.24			
N21	C*	08675	31.0	1.04	6.28	2.10			
N21	D	09686	26.2	0.109 J	1.68	1.38			
O19	B	09677	19.8	0.29 J	2.00 J	2.55 J			
O19	C	09678	19.6	0.12 U	2.09	1.82			
O19	D	09679	17.3	0.13 J	2.56	2.76	0.0025 U	0.0025 U	2.5 J
O20	A	09669	22.0	0.43	3.10	2.07			
O20	B	09670	22.4	0.118 J	1.20	0.78	0.0025 U	0.0025 U	1.2 J
O20	C	09671	24.5	0.26 J	1.08	1.28			
O20	D	09672	23.2	0.26 J	2.19	2.20			
O21	A*	08856	34.9	0.28 J	3.28	2.51			
O21	B*	08754	34.0	1.79	3.14	1.88			
O21	C*	09000	36.0	0.26 U	4.69	3.75			
O21	D*	09373	36.0	0.32 J	1.42	1.34			
P19	B	09659	19.2	0.061 J	0.93	0.77	0.0025 U	0.0022 J	0.62 J
P19	C	09661	19.1	0.118 J	0.43	0.62			
P19	D	09662	19.7	0.21 U	0.42	0.67			
P20	A	09654	19.6	0.20 J	0.33 J	0.41 J			
P20	B	09656	21.6	0.17 U	0.85 J	0.76			
P20	C	09658	23.1	0.13 J	1.65	1.74	0.0026 U	0.0030 J	0.95 J
P20	D	09660	20.9	0.17 J	0.70 J	0.51 J			
P21	A*	08463	32.9	0.21 J	2.43	2.41	0.0026 U	0.0026 U	2.0 J
P21	B	09687	25.7	0.30 J	2.99	2.33	0.0025 U	0.0025 U	1.5 J
P21	C*	08649	31.0	1.26	1.59	1.41			
P21	D*	09119	34.3	0.20 J	1.22	1.13			
Q19	C	09644	16.9	0.22 U	0.39 J	0.23 J			
Q19	D	09645	18.1	0.067 J	0.31 J	0.17 U	0.0025 U	0.0025 U	0.43 J
Q20	A	09652	22.0	0.28 J	0.31 J	0.12 J	0.0025 U	0.0042	1.2 J
Q20	B	09653	24.4	0.12 J	0.53 J	0.37 J			
Q20	C	09655	24.8	0.21 U	0.76	0.54			

Cell 11-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q20	D	09657	23.3	0.17 U	0.36 J	0.56			
Q21	A	08100	23.9	0.30 J	2.50	3.67			
Q21	B	08101	24.9	0.18 U	1.62	1.64	0.0026 U	0.0026 U	1.9 J
Q21	C	08102	26.3	0.48	2.80	2.61			
Q21	D	08103	25.3	0.22 J	2.78	2.71			

Cell 11-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 11-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

* - SP and DL samples selected to represent VF samples. For sample ID number 08486 (subcell N21, location A*) and for sample ID number 08463 (subcell P21, location A*), SP samples taken from test pits were used. For sample ID numbers 08648, 08675 (subcell N21, locations B* and A*, respectively), all samples (subcell O21), and samples 08649 and 09119 (subcell P21, locations C* and D*, respectively), samples were obtained from borings (DL samples). Due to a field error in subcell O21, VOCs and Ni samples were not collected and the actual location of the samples attributed to subcell O21 are in subcell O22 as listed in Table 5 and Figure 5 (O22-DL06).

Cell 11-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	1.79	34.0	O21
Maximum U-234 (pCi/g)	15.7	31.0	N21
Maximum U-238 (pCi/g)	9.18	25.4	M21
Maximum TCE (mg/kg)	0.0026 U	15.9	M19
		19.4	M20
		24.9	M21
		20.6	N20
		32.0	N21
		23.1	P20
		32.9	P21
		24.9	Q21
Maximum PCE (mg/kg)	0.0042	22.0	Q20
Maximum Ni (mg/kg)	2.5 J	17.3	O19

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
N21	DL02	08635	27.0	0.47		< 4.65			
N21	DL02	08636	28.0	0.46		< 5.29			
N21	DL02	08637	29.0	0.60		< 3.95			
N21	DL02	08638	30.0	0.49		< 3.24			
N21	DL02	08639	31.0	0.28 J	0.68	0.47			
N21	DL04	08644	27.0	0.59		3.33			
N21	DL04	08645	28.0	0.75		< 7.43			
N21	DL04	08646	29.0	0.42		7.22			
N21	DL04	08647	30.0	0.31		10.19			
N21	DL04	08648	31.0	0.66	15.7	2.24			
N21	DL05	08653	27.0	0.50		< 6.75			
N21	DL05	08654	28.0	0.33		4.96 J			
N21	DL05	08655	29.0	0.26		4.21 J			
N21	DL05	08656	30.0	0.26		11.01			
N21	DL05	08657	31.0	0.28 J	11.5	1.74	0.104 U	0.104 U	
N21	DL08	08663	27.0	0.69		< 4.43			
N21	DL08	08664	28.0	0.69		6.83			
N21	DL08	08665	29.0	0.53		< 3.17			
N21	DL08	08666	30.0	0.68		5.08			
N21	DL08	08667	31.0	0.60	8.31	3.36			
N21	DL09	08671	27.0	0.59		< 3.26			
N21	DL09	08672	28.0	0.60		3.66 J			
N21	DL09	08673	29.0	0.50		< 3.85			
N21	DL09	08674	30.0	0.68		8.22 J			
N21	DL09	08675	31.0	1.04	6.28	2.10			
N21	DL11	08678	27.0	2.25		< 7.69			
N21	DL11	08679	28.0	1.79		15.92			
N21	DL11	08680	29.0	1.43		< 5.29			
N21	DL11	08681	30.0	1.73		< 6.77			
N21	DL11	08682	31.0	1.61	20.3	2.24	0.092 U	0.092 U	
N22	DL01	08683	27.0	0.45		< 3.86			
N22	DL01	08684	28.0	0.65		< 4.15			
N22	DL01	08685	29.0	0.47		< 4.05			
N22	DL01	08686	30.0	0.38		< 3.99			
N22	DL01	08687	31.0	0.55	6.08	2.82	0.085 U	0.085 U	
N22	DL02	08692	27.0	0.57		< 3.72			
N22	DL02	08693	28.0	0.64		< 4.28			
N22	DL02	08694	29.0	0.87		8.59			
N22	DL02	08695	30.0	0.76		< 5.12			
N22	DL02	08696	31.0	1.02	9.28	2.14			
N22	DL03	08697	27.0	1.86		< 8.35			
N22	DL03	08698	28.0	1.13		< 5.06			
N22	DL03	08710	29.0	1.14		< 8.72			
N22	DL03	08711	30.0	1.38		< 4.82			
N22	DL03	08712	31.0	1.44	16.3	1.72			
O19	DL01	09778	19.0	0.41		< 3.60			
O19	DL01	09779	20.0	0.23		5.20			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O19	DL01	09780	21.0	0.20		< 2.65			
O19	DL01	09781	22.0	0.17		< 2.91			
O19	DL01	09790	23.0	0.16		< 2.38			
O19	DL01	09791	24.0	0.23		3.09 J			
O19	DL01	09792	25.0	0.17		< 2.84			
O19	DL01	09793	26.0	0.22 U	1.83	1.33	0.108 U	0.108 U	
O21	DL01	08628	40.0	3.42		< 10.29			
O21	DL01	08630	41.0	3.20		< 5.95			
O21	DL01	08631	42.0	2.84		11.54 J			
O21	DL01	08632	43.0	2.15 J		< 3.50			
O21	DL01	08691	44.0	2.48		< 7.40			
O21	DL01	08733	45.0	1.44		< 4.15			
O21	DL01	08734	46.0	2.14		< 7.73			
O21	DL01	08746	47.0	1.99		8.13 J			
O21	DL01	08747	48.0	1.43	3.22	2.52			4.3 U
O21	DL02	08699	34.0	0.63		< 3.41			
O21	DL02	08700	35.0	0.78		4.72 J			
O21	DL02	08701	36.0	1.66		8.61 J			
O21	DL02	08702	37.0	2.28		10.19 J			
O21	DL02	08703	38.0	2.12		7.59 J			
O21	DL02	08704	39.0	2.18		< 5.27			
O21	DL02	08705	40.0	2.54		7.71 J			
O21	DL02	08706	41.0	2.20		6.06 J			
O21	DL02	08707	42.0	2.67		< 7.66			
O21	DL02	08708	43.0	1.57		< 3.87			
O21	DL02	08709	44.0	1.66		< 6.37			
O21	DL02	08743	45.0	1.55		< 4.65			
O21	DL02	08744	46.0	1.65		9.36 J			
O21	DL02	08752	47.0	1.66		< 5.31			
O21	DL02	08753	48.0	1.05	1.92	1.50			3.4 J
O21	DL03	08754	34.0	1.79	3.14	1.88			
O21	DL03	08755	35.0	1.80		< 6.57			
O21	DL03	08756	36.0	3.28		< 7.51			
O21	DL03	08757	37.0	2.00		< 6.93			
O21	DL03	08759	38.0	1.08		7.02 J			
O21	DL03	08760	39.0	1.02		< 4.20			
O21	DL03	08770	40.0	0.93		< 3.86			
O21	DL03	08771	41.0	1.01		4.88 J			
O21	DL03	08772	42.0	0.97		< 5.16			
O21	DL03	08773	43.0	1.55		< 6.01			
O21	DL03	08774	44.0	0.99		< 5.24			
O21	DL03	08775	45.0	1.80		< 4.78			
O21	DL03	08776	46.0	1.70		< 4.71			
O21	DL03	08777	47.0	1.05		< 4.39			
O21	DL03	08778	48.0	2.10	2.67	2.13	0.102 U	0.102 U	4.1 U
O21	DL04	08812	34.0	0.52		< 5.03			
O21	DL04	08813	35.0	0.60		5.93 J			

Cell 11-Table 5
 Focused Soil Boring Sample Results

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O21	DL04	08814	36.0	0.84		< 4.00			
O21	DL04	08815	37.0	0.59		< 6.31			
O21	DL04	08817	38.0	0.43		< 4.23			
O21	DL04	08818	39.0	0.41		< 3.83			
O21	DL04	08820	40.0	0.38		< 2.86			
O21	DL04	08821	41.0	0.40		< 5.69			
O21	DL04	08824	42.0	0.54		< 4.86			
O21	DL04	08825	43.0	1.33		< 4.13			
O21	DL04	08826	44.0	2.13		< 5.64			
O21	DL04	08827	45.0	2.05		7.25 J			
O21	DL04	08849	46.0	1.70		6.17 J			
O21	DL04	08850	47.0	1.09		< 4.77			
O21	DL04	08848	48.0	1.16	1.81	1.41	0.0029 U	0.0029 U	4.4 J
O21	DL05	08833	34.0	0.62		5.20 J			
O21	DL05	08834	35.0	0.60		5.76			
O21	DL05	08835	36.0	0.42		3.70			
O21	DL05	08836	37.0	0.46		5.47			
O21	DL05	08837	38.0	0.34		< 3.49			
O21	DL05	08838	39.0	0.28		< 1.86			
O21	DL05	08839	40.0	0.42		< 3.25			
O21	DL05	08840	41.0	0.42		5.72 J			
O21	DL05	08841	42.0	0.29		< 2.52			
O21	DL05	08842	43.0	1.13		9.00			
O21	DL05	08843	44.0	2.48		8.95 J			
O21	DL05	08844	45.0	2.38		11.48 J			
O21	DL05	08845	46.0	1.16		8.62 J			
O21	DL05	08846	47.0	1.12		< 6.09			
O21	DL05	08851	48.0	1.18	1.73	1.21	0.0031 U	0.0031 U	5.6
O21	DL06	08897	34.0	0.50		< 3.79			
O21	DL06	08898	35.0	0.34		< 2.55			
O21	DL06	08899	36.0	0.36		7.88			
O21	DL06	08900	37.0	0.38		< 3.19			
O21	DL06	08901	38.0	0.38		< 3.42			
O21	DL06	08902	39.0	0.26		< 3.57			
O21	DL06	08903	40.0	0.31		< 3.23			
O21	DL06	08904	41.0	0.25		< 2.62			
O21	DL06	08905	42.0	0.46		4.17			
O21	DL06	08911	43.0	< 0.06		< 2.95			
O21	DL06	08912	44.0	0.99		5.14 J			
O21	DL06	08913	45.0	0.61		< 3.70			
O21	DL06	08914	46.0	0.82		< 4.41			
O21	DL06	08924	47.0	1.09		< 6.49			
O21	DL06	08925	48.0	0.88	1.89	1.48	0.0031 U	0.0031 U	4.0 J
O21	DL07	08856	34.0	0.28 J	3.28	2.51			
O21	DL07	08857	35.0	0.41		< 3.96			
O21	DL07	08858	36.0	0.43		< 4.28			
O21	DL07	08859	37.0	0.30		9.77			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Fl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O21	DL07	08860	38.0	0.34		< 3.29			
O21	DL07	08861	39.0	< 0.03		3.61 J			
O21	DL07	08862	40.0	0.25		< 3.61			
O21	DL07	08863	41.0	0.25		6.44 J			
O21	DL07	08868	42.0	0.22		< 2.44			
O21	DL07	08869	43.0	0.32		< 2.76			
O21	DL07	08870	44.0	0.63		< 3.38			
O21	DL07	08871	45.0	1.68		7.92 J			
O21	DL07	08877	46.0	0.47		< 2.96			
O21	DL07	08878	47.0	0.38 J	1.47	1.39	0.0026 U	0.0026 U	4.1 U
O21	DL08	08932	36.0	0.55		3.71			
O21	DL08	08933	37.0	0.33		5.16			
O21	DL08	08934	38.0	0.23		7.89			
O21	DL08	08935	39.0	0.27		< 2.71			
O21	DL08	08936	40.0	0.26		3.83			
O21	DL08	08937	41.0	< 0.02		< 3.70			
O21	DL08	08944	42.0	0.56		< 4.16			
O21	DL08	08945	43.0	0.23		3.52 UJ			
O21	DL08	08946	44.0	0.50		< 3.17			
O21	DL08	08947	45.0	1.40		5.38 UJ	0.0026 U	0.0026 U	4.1 U
O21	DL08	08959	46.0	1.49		< 5.27			
O21	DL08	08960	47.0	1.41		8.15 J			
O21	DL08	08971	48.0	1.29		< 5.21			
O21	DL08	08972	49.0	0.99	1.50	1.29	0.0031 U	0.0031 U	3.9 J
O21	DL09	08906	36.0	0.53		3.29 J			
O21	DL09	08907	37.0	0.41		5.83 J			
O21	DL09	08908	38.0	0.39		5.40 J			
O21	DL09	08909	39.0	0.37		9.15			
O21	DL09	08910	40.0	0.39 J		5.45 J			
O21	DL09	08915	41.0	0.65		< 5.49			
O21	DL09	08916	42.0	0.38		4.63 J			
O21	DL09	08919	43.0	0.65		< 5.38			
O21	DL09	08920	44.0	2.42		5.91 UJ			
O21	DL09	08921	45.0	1.56		< 6.48			
O21	DL09	08922	46.0	2.74		< 5.67			
O21	DL09	08923	47.0	2.12		< 8.00			
O21	DL09	08926	48.0	1.20		8.27			
O21	DL09	08927	49.0	1.14	8.89	7.01	0.0033 U	0.0095	14.7
O21	DL10	09373	36.0	0.32 J	1.42	1.34			
O21	DL10	09374	37.0	< 0.03		< 11.24			
O21	DL10	09375	38.0	0.39		4.00 UJ			
O21	DL10	09376	39.0	0.36		< 3.78			
O21	DL10	09377	40.0	0.13 J		4.60 J			
O21	DL10	09378	41.0	0.20		2.99 UJ			
O21	DL10	09379	42.0	0.20		< 2.60			
O21	DL10	09380	43.0	0.21		< 3.13			
O21	DL10	09387	44.0	0.29		< 3.91			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O21	DL10	09388	45.0	1.26		< 4.36			
O21	DL10	09389	46.0	2.80		6.88 J			
O21	DL10	09390	47.0	2.39		< 9.10			
O21	DL10	09391	48.0	1.26		5.01			
O21	DL10	09392	49.0	0.64	1.11	1.16	0.0033 U	0.026 J	9.6
O21	DL11	08796	40.0	0.17		< 2.35			
O21	DL11	08797	41.0	0.16		6.62			
O21	DL11	08798	42.0	0.23		4.93 J			
O21	DL11	08830	43.0	0.23		< 2.56			
O21	DL11	08831	44.0	0.27		4.45			
O21	DL11	08832	45.0	0.31		3.17 J			
O21	DL11	08847	46.0	0.25		< 2.95			
O21	DL11	08852	47.0	0.57		< 3.99			
O21	DL11	08853	48.0	0.46	1.13	1.06	0.0026 U	0.0026 U	4.2 U
O21	DL12	08940	36.0	0.58		< 2.65			
O21	DL12	08941	37.0	0.29		4.81 UJ			
O21	DL12	08942	39.0	0.20		4.24 UJ			
O21	DL12	08943	38.0	0.15		2.97			
O21	DL12	08948	40.0	0.24		3.27 UJ			
O21	DL12	08949	41.0	0.19		< 3.34			
O21	DL12	08950	42.0	0.30		5.25 J			
O21	DL12	08951	43.0	0.26		3.77			
O21	DL12	08952	44.0	0.27		< 2.48			
O21	DL12	08953	45.0	0.31		4.82 J			
O21	DL12	08954	46.0	0.35		< 2.63			
O21	DL12	08955	47.0	0.38		< 5.27			
O21	DL12	08956	48.0	1.47		4.80 J			
O21	DL12	08957	49.0	0.89 J	1.10	1.06	0.0032 U	0.0015 J	4.5 J
O21	DL13	09328	36.0	1.05		9.31			
O21	DL13	09329	37.0	0.54		< 4.27			
O21	DL13	09330	38.0	0.52		< 3.30			
O21	DL13	09331	39.0	0.60		< 4.42			
O21	DL13	09332	40.0	< 0.08		< 2.62			
O21	DL13	09333	41.0	0.39		< 4.45			
O21	DL13	09334	42.0	0.32		< 6.28			
O21	DL13	09335	43.0	0.35		< 3.94			
O21	DL13	09336	44.0	0.32		< 3.26			
O21	DL13	09337	45.0	1.34		< 4.57			
O21	DL13	09338	46.0	2.15		< 5.83			
O21	DL13	09339	47.0	2.76		< 8.46			
O21	DL13	09352	48.0	1.47		< 6.73			
O21	DL13	09353	49.0	0.87	1.20	0.93	0.0031 U	0.0035	6.8
O21	DL14	09348	37.0	0.35		< 3.66			
O21	DL14	09349	38.0	0.46		< 3.73			
O21	DL14	09350	39.0	0.34		< 4.11			
O21	DL14	09351	40.0	0.20		< 3.72			
O21	DL14	09362	41.0	0.18		< 2.59			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O21	DL14	09363	42.0	0.18		< 2.70			
O21	DL14	09364	43.0	0.30		4.18 J			
O21	DL14	09365	44.0	0.34		< 2.76			
O21	DL14	09366	45.0	0.29		4.57 J			
O21	DL14	09367	46.0	1.58		6.23 UJ			
O21	DL14	09368	47.0	2.88		< 9.39			
O21	DL14	09369	48.0	1.36		7.34 J			
O21	DL14	09371	49.0	1.02	1.22	1.41	0.0033 U	0.0033	9.7
O22	DL01	08724	37.0	1.88		< 6.80			
O22	DL01	08725	38.0	1.82		< 6.59			
O22	DL01	08726	39.0	1.89		< 5.00			
O22	DL01	08727	40.0	1.71		14.14			
O22	DL01	08728	41.0	1.58		< 6.85			
O22	DL01	08729	42.0	1.46		4.28 J			
O22	DL01	08730	43.0	1.53		< 4.57			
O22	DL01	08731	44.0	1.32		6.50 J			
O22	DL01	08748	45.0	1.21		< 4.22			
O22	DL01	08749	46.0	1.59		< 5.58			
O22	DL01	08855	47.0	1.33		< 6.24			
O22	DL01	08854	48.0	1.82	2.96	1.74	0.0026 U	0.0026 U	4.1 U
O22	DL02	08780	34.0	0.27		< 2.88			
O22	DL02	08781	35.0	0.22		< 2.19			
O22	DL02	08782	36.0	0.39		< 2.85			
O22	DL02	08783	37.0	0.42		8.91			
O22	DL02	08784	38.0	0.37		< 3.75			
O22	DL02	08787	39.0	0.57		< 3.25			
O22	DL02	08788	40.0	0.34		< 4.19			
O22	DL02	08790	41.0	0.64		7.18 J			
O22	DL02	08791	42.0	0.50		< 3.40			
O22	DL02	08792	43.0	0.74		11.87			
O22	DL02	08793	44.0	0.77		< 3.82			
O22	DL02	08794	45.0	0.79		6.48 J			
O22	DL02	08802	46.0	0.96		< 5.82			
O22	DL02	08803	47.0	0.85		8.01 J			
O22	DL02	08804	48.0	0.98	4.52	2.95			4.2 U
O22	DL03	09149	34.0	0.21		5.46 J			
O22	DL03	09150	35.0	0.19		< 3.19			
O22	DL03	09151	36.0	0.24		< 2.54			
O22	DL03	09152	37.0	0.31		5.21 J			
O22	DL03	09153	38.0	0.26		4.62 J			
O22	DL03	09154	39.0	0.49		4.64			
O22	DL03	09155	40.0	0.38		7.66			
O22	DL03	09156	41.0	0.31		< 3.69			
O22	DL03	09157	42.0	0.18		< 2.86			
O22	DL03	09158	43.0	0.26		4.29 J			
O22	DL03	09159	44.0	0.43		< 4.19			
O22	DL03	09160	45.0	0.81		< 3.71			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O22	DL03	09161	46.0	1.11		5.52			
O22	DL03	09162	47.0	0.59		< 5.86			
O22	DL03	09170	48.0	1.28		12.30			
O22	DL03	09174	49.0	0.87	6.06	5.07	0.0032 U	0.0032 U	8.5 J
O22	DL05	08714	28.0	1.43		8.16 J			
O22	DL05	08715	29.0	1.00		< 5.90			
O22	DL05	08716	30.0	0.83		4.05			
O22	DL05	08717	31.0	0.58		< 11.75			
O22	DL05	08718	32.0	0.59		< 3.21			
O22	DL05	08719	33.0	0.46		6.96			
O22	DL05	08720	34.0	0.35		5.89 J			
O22	DL05	08723	35.0	0.71		< 5.42			
O22	DL05	08928	36.0	0.70		< 5.19			
O22	DL05	08930	37.0	0.49		5.01			
O22	DL05	08931	38.0	0.60		7.55 J			
O22	DL05	08938	39.0	0.56		3.26			
O22	DL05	08939	40.0	0.40		< 1.79			
O22	DL05	08961	41.0	0.50		< 4.07			
O22	DL05	08962	42.0	0.57		5.77 J			
O22	DL05	08973	43.0	0.60		< 4.47			
O22	DL05	08998	44.0	0.40		< 4.00			
O22	DL05	08996	45.0	0.92		< 3.45			
O22	DL05	08995	46.0	0.86		< 4.15			
O22	DL05	09006	47.0	1.09		10.32			
O22	DL05	09007	48.0	1.11		11.15 J			
O22	DL05	09009	49.0	1.19	5.85	5.03	0.0034 U	0.061	8.0
O22	DL06	08735	29.0	0.67		7.60 J			
O22	DL06	08736	30.0	0.50		13.23			
O22	DL06	08737	31.0	0.69		5.62			
O22	DL06	08738	32.0	0.39		3.94			
O22	DL06	08739	33.0	0.43		< 4.71			
O22	DL06	08740	34.0	0.65		< 4.95			
O22	DL06	08745	35.0	0.38		< 4.21			
O22	DL06	09000	36.0	0.26 U	4.69	3.75			
O22	DL06	09002	37.0	0.47		< 4.33			
O22	DL06	09003	38.0	0.34		< 3.80			
O22	DL06	09005	39.0	0.52		9.03 J			
O22	DL06	09019	40.0	0.47		< 3.66			
O22	DL06	09020	41.0	0.83		< 5.18			
O22	DL06	09024	42.0	1.08		< 4.92			
O22	DL06	09025	43.0	1.00		< 4.69			
O22	DL06	09030	44.0	1.84		< 7.22			
O22	DL06	09031	46.0	1.28		< 6.26			
O22	DL06	09032	47.0	0.90		< 3.91			
O22	DL06	09033	48.0	1.02		< 6.14			
O22	DL06	09034	49.0	0.94	9.04	7.12	0.0032 U	0.00033 J	10.8
O22	DL07	08864	36.0	1.70		< 5.28			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-235 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O22	DL07	08865	37.0	2.12		8.16 J			
O22	DL07	08866	38.0	1.79		< 5.03			
O22	DL07	08867	39.0	1.52		< 4.92			
O22	DL07	08872	40.0	1.86		< 7.19			
O22	DL07	08873	41.0	1.83		12.39			
O22	DL07	08874	42.0	1.65		< 6.63			
O22	DL07	08875	43.0	2.52		< 7.32			
O22	DL07	08876	44.0	2.01		< 4.96			
O22	DL07	08893	45.0	1.82		< 6.63			
O22	DL07	08894	46.0	2.16		< 7.69			
O22	DL07	08895	47.0	2.45		< 8.75			
O22	DL07	08896	48.0	1.26		4.95	0.0033 U	0.00047 J	10.3
O22	DL07	08929	49.0	1.11	1.37	0.92	0.0031 U	0.0031 U	7.0
O22	DL08	09306	36.0	0.84		9.06 J			
O22	DL08	09307	37.0	2.23		< 7.84			
O22	DL08	09308	38.0	1.71		< 6.51			
O22	DL08	09309	39.0	2.08		< 6.47			
O22	DL08	09313	40.0	1.49		< 4.45			
O22	DL08	09314	41.0	1.69		6.81 J			
O22	DL08	09315	42.0	1.28		< 6.54			
O22	DL08	09316	43.0	1.97		< 4.98			
O22	DL08	09322	44.0	1.90		< 5.43			
O22	DL08	09323	45.0	1.71		< 5.57	0.112 U	0.112 U	
O22	DL08	09324	46.0	1.44		< 5.36	0.114 U	0.114 U	
O22	DL08	09325	47.0	1.14		8.85 J	0.122 U	0.122 U	
O22	DL08	09326	48.0	1.51		< 8.54	0.093 U	0.093 U	
O22	DL08	09327	49.0	1.38	3.57	2.40	0.0033 U	0.045 J	10.6
P19	DL01	09765	19.0	0.18		7.30			
P19	DL01	09766	20.0	0.32		7.38			
P19	DL01	09767	21.0	0.15		2.79 J			
P19	DL01	09768	22.0	< 0.04		< 2.07			
P19	DL01	09783	23.0	0.12		4.61 J			
P19	DL01	09784	24.0	0.19		< 1.36			
P19	DL01	09785	25.0	< 0.03		< 1.70			
P19	DL01	09782	26.0	0.17 U	0.53 J	0.38 J	0.0025 U	0.0025 U	1.2 J
P19	DL02	09786	19.0	0.20		< 2.74			
P19	DL02	09787	20.0	0.21		< 3.51			
P19	DL02	09788	21.0	0.30		< 3.41			
P19	DL02	09789	22.0	0.25		< 3.08			
P19	DL02	09794	23.0	< 0.05		< 2.91			
P19	DL02	09795	24.0	0.19		< 2.89			
P19	DL02	09796	25.0	0.15		< 0.84			
P19	DL02	09797	26.0	0.22 J	0.62 J	0.43 J	0.0025 U	0.0025 U	0.90 J
P19	DL03	09697	19.0	0.24		3.51 J			
P19	DL03	09698	20.0	0.15		5.46			
P19	DL03	09700	21.0	0.15		2.46 J			
P19	DL03	09701	22.0	0.19		3.65 J			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subsist	Boring Location	Sample ID	Depth (feet)	Ti-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P19	DL03	09716	23.0	0.20		3.63 J			
P19	DL03	09720	24.0	0.22		4.06 J			
P19	DL03	09721	25.0	0.16		< 2.57			
P19	DL03	09718	26.0	0.094 U	0.31 J	0.34 J	0.0025 U	0.0025 U	3.6 J
P19	DL04	09732	19.0	0.25		4.83 J			
P19	DL04	09734	20.0	0.17		< 2.54			
P19	DL04	09735	21.0	0.29		< 3.45			
P19	DL04	09736	22.0	0.26		< 2.28			
P19	DL04	09737	23.0	0.20		2.67 J			
P19	DL04	09738	24.0	0.32		< 2.44			
P19	DL04	09739	25.0	0.18		< 3.22			
P19	DL04	09747	26.0	0.28 J	0.45	0.26 J	0.0025 U	0.0025 U	1.1 J
P19	DL05	09750	19.0	0.19		3.72 J			
P19	DL05	09752	20.0	0.18		< 2.26			
P19	DL05	09753	21.0	0.16		< 2.47			
P19	DL05	09755	22.0	0.12		< 2.18			
P19	DL05	09757	23.0	0.23		< 2.98			
P19	DL05	09761	24.0	0.20		< 2.74			
P19	DL05	09762	25.0	0.14		< 2.31			
P19	DL05	09758	26.0	0.21 J	0.23 J	0.40 J	0.0025 U	0.0025 U	2.5 J
P19	DL06	09770	19.0	0.20		8.28 J			
P19	DL06	09771	20.0	0.22		< 3.01			
P19	DL06	09772	21.0	0.15		3.38 J			
P19	DL06	09773	22.0	0.15		< 2.06			
P19	DL06	09774	23.0	0.20		4.25 J			
P19	DL06	09775	24.0	0.24		3.72 J			
P19	DL06	09776	25.0	0.14		< 2.19			
P19	DL06	09777	26.0	0.24 U	0.54 J	0.56 J	0.0025 U	0.0025 U	2.5 J
P21	DL01	09083	35.0	0.17		6.30			
P21	DL01	09085	36.0	< 0.04		5.79 J			
P21	DL01	09086	37.0	0.14		< 2.39			
P21	DL01	09087	38.0	0.23		4.46 J			
P21	DL01	09089	39.0	0.26		< 3.34			
P21	DL01	09090	40.0	0.16		< 3.46			
P21	DL01	09091	41.0	0.18		< 2.73			
P21	DL01	09092	42.0	0.24		< 3.10			
P21	DL01	09093	43.0	0.22		< 3.95			
P21	DL01	09094	44.0	0.31		< 2.52	0.107 U	0.107 U	
P21	DL01	09096	45.0	0.85		< 4.24	0.106 U	0.106 U	
P21	DL01	09101	46.0	0.76		< 3.93	0.107 U	0.107 U	
P21	DL01	09103	47.0	0.73		< 4.01	0.097 U	0.256	
P21	DL01	09104	48.0	1.27		< 6.70	0.086 U	0.200	
P21	DL01	09105	49.0	1.08	1.82	1.34	0.0031 U	0.0031 U	3.1 J
P21	DL02	09119	34.0	0.20 J	1.22	1.13			
P21	DL02	09120	35.0	0.21		< 3.77			
P21	DL02	09121	36.0	0.22		3.83			
P21	DL02	09122	37.0	0.23		< 3.48			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P21	DL02	09125	38.0	0.39		< 4.28			
P21	DL02	09126	39.0	< 0.05		< 2.46			
P21	DL02	09127	40.0	0.39		4.17 J			
P21	DL02	09128	41.0	0.22		< 3.28			
P21	DL02	09135	42.0	0.15		< 2.33			
P21	DL02	09136	43.0	0.17		< 3.77			
P21	DL02	09137	44.0	0.32		< 3.68			
P21	DL02	09138	45.0	0.76		5.31 J			
P21	DL02	09145	46.0	0.51		< 4.60			
P21	DL02	09146	47.0	1.25		< 6.14			
P21	DL02	09147	48.0	1.36		< 6.73			
P21	DL02	09148	49.0	0.64	1.29	1.49	0.0033 U	0.016	2.4 J
P21	DL03	09175	34.0	0.86		< 3.39			
P21	DL03	09176	35.0	0.78		7.86 J			
P21	DL03	09177	36.0	1.14		< 5.28			
P21	DL03	09178	37.0	1.00		< 3.70			
P21	DL03	09179	38.0	0.95		< 3.75			
P21	DL03	09180	39.0	1.34		< 6.17			
P21	DL03	09181	40.0	0.46		5.26 J			
P21	DL03	09182	41.0	0.48		< 3.90			
P21	DL03	09193	42.0	0.70		< 4.46			
P21	DL03	09194	43.0	0.50		6.41 J			
P21	DL03	09195	44.0	0.61		< 3.75			
P21	DL03	09196	45.0	1.22		< 5.55			
P21	DL03	09201	46.0	1.26		< 5.77			
P21	DL03	09202	47.0	0.74		< 4.75			
P21	DL03	09203	48.0	0.89		9.44 J			
P21	DL03	09204	49.0	1.37	1.82	1.88	0.0032 U	0.0038	10.0 J
P21	DL04	09205	34.0	0.26		2.55 UJ			
P21	DL04	09206	35.0	0.18		2.96 UJ			
P21	DL04	09207	36.0	0.19		3.11 UJ			
P21	DL04	09208	37.0	0.23		3.44 UJ			
P21	DL04	09209	38.0	0.32		2.83 UJ			
P21	DL04	09210	39.0	< 0.06		3.89 UJ			
P21	DL04	09211	40.0	0.22		3.00 UJ			
P21	DL04	09212	41.0	0.36		5.11 J			
P21	DL04	09213	42.0	0.22		5.96 J			
P21	DL04	09214	43.0	0.23		4.89 UJ			
P21	DL04	09215	44.0	0.43		2.73 UJ			
P21	DL04	09216	45.0	0.73		8.62 J			
P21	DL04	09227	46.0	0.54	0.48 J	0.51	0.0026 U	0.0026 U	4.1 U
P21	DL05	09228	34.0	0.16		3.33 J			
P21	DL05	09229	35.0	0.17		2.78 UJ			
P21	DL05	09230	36.0	0.24		2.62 UJ			
P21	DL05	09231	37.0	0.28		2.84 UJ			
P21	DL05	09232	38.0	< 0.07		2.81 UJ			
P21	DL05	09233	39.0	0.29		3.11 J			

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P21	DL05	09234	40.0	0.27		4.05 UJ			
P21	DL05	09235	41.0	0.35		4.50 J			
P21	DL05	09238	42.0	0.32		3.07 UJ			
P21	DL05	09239	43.0	0.40		3.47 UJ			
P21	DL05	09240	44.0	0.36		5.08 UJ			
P21	DL05	09244	45.0	0.89		4.59 J	0.110 U	0.110 U	
P21	DL05	09245	46.0	1.24		5.43 UJ	0.089 U	0.180	
P21	DL05	09246	47.0	1.49		10.88 J	0.098 U	0.098 U	
P21	DL05	09248	48.0	0.90	4.90	3.87	0.0031 U	0.0031 U	4.5 J
P22	DL01	08640	28.0	1.02		< 3.94			
P22	DL01	08642	29.0	1.08		< 4.05			
P22	DL01	08643	30.0	0.94		5.74			
P22	DL01	08649	31.0	1.26	1.59	1.41			
P22	DL01	08650	32.0	0.83		< 3.48			
P22	DL01	08651	33.0	0.58	1.25	1.16	0.101 U	0.101 U	
P22	DL02	08661	28.0	0.49		< 3.30			
P22	DL02	08662	29.0	0.61		7.69 J			
P22	DL02	08669	30.0	0.32		< 2.89			
P22	DL02	08670	31.0	0.32		< 5.50			
P22	DL02	08689	32.0	0.30		8.71			
P22	DL02	08690	33.0	0.22 U	0.92	0.72 J			
Q19	DL01	09617	19.0	0.21		< 3.46			
Q19	DL01	09618	20.0	0.20		< 2.52			
Q19	DL01	09619	21.0	0.14		2.37 J			
Q19	DL01	09620	22.0	0.23		< 2.96			
Q19	DL01	09629	23.0	0.18		< 2.51			
Q19	DL01	09633	24.0	0.15		< 2.36			
Q19	DL01	09634	25.0	0.27		< 3.03			
Q19	DL01	09631	26.0	0.18 J	0.23 J	0.30 J	0.0026 U	0.0024 J	2.3 J
Q19	DL02	09693	19.0	0.26		< 3.75			
Q19	DL02	09694	20.0	0.20		2.51 J			
Q19	DL02	09695	21.0	0.23		4.24 J			
Q19	DL02	09696	22.0	0.18		< 2.40			
Q19	DL02	09703	23.0	0.35		< 2.94			
Q19	DL02	09705	24.0	0.13 J		< 1.16			
Q19	DL02	09706	25.0	0.19		< 3.18			
Q19	DL02	09699	26.0	0.12 J	0.29 J	0.26 J	0.00025 J	0.0025 U	1.6 J
Q19	DL03	09709	19.0	0.28		6.03 J			
Q19	DL03	09711	20.0	0.27		< 2.88			
Q19	DL03	09713	21.0	0.22		< 2.54			
Q19	DL03	09714	22.0	< 0.04		3.28 J			
Q19	DL03	09730	23.0	0.24		< 2.81			
Q19	DL03	09729	24.0	0.23		< 3.22			
Q19	DL03	09731	25.0	0.19		< 2.72			
Q19	DL03	09727	26.0	0.13 J	0.31 J	0.30 J	0.0025 U	0.0025 U	2.5 J
Q19	DL04	09740	19.0	0.22		6.52			
Q19	DL04	09741	20.0	0.26		< 2.96			

**Cell 11-Table 5
 Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q19	DL04	09742	21.0	0.21		3.16 J			
Q19	DL04	09743	22.0	0.20		< 2.71			
Q19	DL04	09763	23.0	0.18		3.30 J			
Q19	DL04	09764	24.0	0.16		3.20 J			
Q19	DL04	09769	25.0	0.22		3.45 J			
Q19	DL04	09760	26.0	0.24 J	0.34 J	0.30 J	0.0025 U	0.0025 U	2.3 J

**Cell 11-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 11-Figure 6 for boring locations.

DL sample is analyzed on Site for radionuclides (TH-232 and U-238) using the gamma spectroscopy system.

DL sample is analyzed for volatile organic compounds (TCE and PCE) using solid phase microextraction and capillary gas chromatography by Stone Environmental Inc.

SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.

Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.

Boring initially called P22-DL03, subcell was corrected to O22.

Samples 09000 (O22-DL06) is located to represent subcell O21 in Cell 11-Table 3 and sample 08649 (P22-DL01) is located to represent subcell P21 in Table 3.

For Sample 09793 (subcell O19-DL01) on-site VOC results were used and no Ni sample was analyzed.

For Sample 08747 (subcell O21-DL01) and 08753 (subcell O21-DL02), VOC samples were not collected.

For Sample 08947 (subcell O21-DL08) radiological samples were not collected for off-Site analysis so on-Site analyses were used.

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
M19	DL01	10876	20.0	0.17		< 3.57			
M19	DL01	10877	21.0	0.22		3.16 J			
M19	DL01	10878	22.0	0.22		11.07			
M19	DL01	10879	23.0	0.33		13.79			
M19	DL01	10880	24.0	0.26		< 3.45			
M19	DL01	10881	25.0	0.21		< 2.33			
M19	DL01	10882	26.0	0.31		5.04 J			
M19	DL01	10883	27.0	0.15		< 3.45			
M19	DL01	10884	28.0	0.27		< 3.43			
M19	DL01	10887	29.0	0.18		< 3.07			
M19	DL01	10888	30.0	0.12		< 2.52			
M19	DL01	10891	31.0	< 0.03		< 3.10			
M19	DL01	10892	32.0	0.23		< 2.67			
M19	DL01	10896	33.0	< 0.04		< 4.75			
M19	DL01	10897	34.0	< 0.04		< 3.18			
M19	DL01	10898	35.0	0.32		< 3.01			
M19	DL01	10899	36.0	0.34		< 3.21			
M19	DL01	10900	37.0	0.19		< 3.21			
M19	DL01	10901	38.0	0.26		< 4.16			
M19	DL01	10904	39.0	0.26		4.91 J			
M19	DL01	10905	40.0	0.15 J	0.42 J	0.31 J	0.0052	0.0026 UJ	1.1 J
M20	DL10	11076	20.0	0.46		< 4.43			
M20	DL10	11084	21.0	< 0.04		3.59 J			
M20	DL10	11085	22.0	0.29		< 3.40			
M20	DL10	11086	23.0	0.29		< 4.07			
M20	DL10	11087	24.0	< 0.03		< 2.78			
M20	DL10	11088	25.0	0.30		4.03 J			
M20	DL10	11089	26.0	< 0.06		< 3.72			
M20	DL10	11090	27.0	0.36		< 3.49			
M20	DL10	11091	28.0	< 0.06		< 3.02			
M20	DL10	11094	29.0	0.25		2.95 J			
M20	DL10	11095	30.0	0.21		< 3.64			
M20	DL10	11096	31.0	0.23		< 3.27			
M20	DL10	11097	32.0	< 0.03		3.16 J			
M20	DL10	11098	33.0	0.29		7.20 J			
M20	DL10	11099	34.0	0.22		< 2.68			
M20	DL10	11104	35.0	0.32		3.48 J			
M20	DL10	11105	36.0	0.23		< 2.84			
M20	DL10	11106	37.0	0.33		4.09 J			
M20	DL10	11107	38.0	0.27		< 3.50			
M20	DL10	11109	39.0	0.38		< 3.27			
M20	DL10	11110	40.0	0.17 J	0.28 J	0.24 J	0.0069	0.0026 UJ	1.7 J
N19	DL02	10906	20.0	0.26		< 3.13			
N19	DL02	10907	21.0	0.29		3.35 J			
N19	DL02	10908	22.0	0.34		6.64 J			
N19	DL02	10924	23.0	< 0.03		4.07 J			
N19	DL02	10925	24.0	0.33		2.97 J			

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
N19	DL02	10926	25.0	< 0.05		3.43 J			
N19	DL02	10927	26.0	< 0.09		5.17 J			
N19	DL02	10928	27.0	0.25		3.65 J			
N19	DL02	10929	28.0	< 0.05		< 3.01			
N19	DL02	10935	29.0	0.21		< 2.91			
N19	DL02	10936	30.0	0.21		6.06 J			
N19	DL02	10937	31.0	< 0.06		< 4.41			
N19	DL02	10938	32.0	< 0.02		2.22 J			
N19	DL02	10942	33.0	0.24		< 4.87			
N19	DL02	10943	34.0	0.23		3.20 J			
N19	DL02	10944	35.0	0.21		< 2.80			
N19	DL02	10945	36.0	0.24		< 2.31			
N19	DL02	10946	37.0	< 0.08		9.33			
N19	DL02	10947	38.0	0.15 U	0.46 J	0.05 J	0.093 U	0.093 UJ	
N19	DL02	10948	39.0	0.35		1.62 J			
N19	DL02	10949	40.0	0.26 J	0.25 J	0.25 J	0.0038	0.0026 UJ	2.7 J
N19	DL03	10950	21.0	0.15		4.52 J			
N19	DL03	10951	22.0	0.26		< 3.01			
N19	DL03	10952	23.0	< 0.12		< 4.09			
N19	DL03	10953	24.0	0.23 J		8.57			
N19	DL03	10954	25.0	0.16		< 1.65			
N19	DL03	10955	26.0	0.34		5.11 J			
N19	DL03	10956	27.0	0.19		8.00			
N19	DL03	10957	28.0	0.25		< 3.49			
N19	DL03	10958	29.0	0.28		4.13 J			
N19	DL03	10959	30.0	0.25 J		< 3.68			
N19	DL03	10960	31.0	0.23		3.47 J			
N19	DL03	10961	32.0	0.16		< 2.96			
N19	DL03	10962	33.0	0.27		< 2.93			
N19	DL03	10963	34.0	0.21		4.59 J			
N19	DL03	10964	35.0	0.31 J		< 3.77			
N19	DL03	10965	36.0	0.22		< 2.09			
N19	DL03	10966	37.0	0.25		< 3.90			
N19	DL03	10967	38.0	0.18		< 2.46			
N19	DL03	10968	39.0	0.34		< 3.83			
N19	DL03	10969	40.0	0.22 J	0.33 J	0.48 J	0.0050	0.0026 UJ	3.3 J
N20	DL11	11231	20.0	0.27		< 3.35			
N20	DL11	11232	21.0	0.33		< 3.05			
N20	DL11	11233	22.0	0.23		5.69 J			
N20	DL11	11234	23.0	< 0.04		< 4.06			
N20	DL11	11236	24.0	< 0.06		< 3.91			
N20	DL11	11237	25.0	< 0.12		< 5.13			
N20	DL11	11238	26.0	0.21		< 3.51			
N20	DL11	11239	27.0	0.20 J		< 3.64			
N20	DL11	11241	28.0	< 0.03		< 2.37			
N20	DL11	11243	29.0	0.19		5.54 J			
N20	DL11	11244	30.0	0.28		< 4.39			

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	U-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
N20	DL11	11245	31.0	0.26		4.74 J			
N20	DL11	11246	32.0	0.26		4.30 J			
N20	DL11	11250	33.0	0.24		4.81			
N20	DL11	11251	34.0	0.19		< 3.70			
N20	DL11	11252	35.0	< 0.06		< 3.28			
N20	DL11	11253	36.0	0.20		< 3.22			
N20	DL11	11254	37.0	0.24		< 2.81			
N20	DL11	11256	38.0	0.22		< 3.41			
N20	DL11	11257	39.0	0.37 J		2.74 J			
N20	DL11	11258	40.0	0.131 J	0.43 J	0.49 J	0.010	0.0025 UJ	2.4 J
N20	DL12	11175	20.0	0.33		4.30 J			
N20	DL12	11176	21.0	0.36		< 3.57			
N20	DL12	11177	22.0	0.36		7.45			
N20	DL12	11179	23.0	0.30		< 4.08			
N20	DL12	11180	24.0	< 0.03		< 3.52			
N20	DL12	11181	25.0	0.31		< 4.14			
N20	DL12	11182	26.0	0.33		< 2.74			
N20	DL12	11183	27.0	< 0.10		< 3.72			
N20	DL12	11184	28.0	0.21		< 3.41			
N20	DL12	11185	29.0	0.25		2.95 J			
N20	DL12	11186	30.0	0.28		< 1.00			
N20	DL12	11187	31.0	0.20		< 3.55			
N20	DL12	11188	32.0	0.21		< 3.87			
N20	DL12	11189	33.0	0.25		< 3.47			
N20	DL12	11190	34.0	0.19		< 3.11			
N20	DL12	11193	35.0	0.22		< 2.89			
N20	DL12	11194	36.0	0.25		< 3.15			
N20	DL12	11198	37.0	< 0.04		< 3.12			
N20	DL12	11199	38.0	0.26		< 3.65			
N20	DL12	11209	39.0	0.42		< 3.45			
N20	DL12	11210	40.0	0.2 U	0.48 J	0.49 J	0.0040	0.0026 UJ	1.9 J
O19	DL04	10996	21.0	0.35		6.12			
O19	DL04	10997	22.0	< 0.04		3.55			
O19	DL04	10998	23.0	0.34		3.73			
O19	DL04	10999	24.0	0.18		8.01			
O19	DL04	11003	25.0	0.23		7.76			
O19	DL04	11004	26.0	0.21		10.76			
O19	DL04	11005	27.0	0.18		5.58			
O19	DL04	11006	28.0	0.28		< 7.67			
O19	DL04	11007	29.0	0.27		< 6.01			
O19	DL04	11008	30.0	< 0.03		< 3.35			
O19	DL04	11011	31.0	0.25		5.08 J			
O19	DL04	11012	32.0	0.26		< 3.32			
O19	DL04	11013	33.0	< 0.09		< 4.31			
O19	DL04	11014	34.0	0.32		< 5.65			
O19	DL04	11017	35.0	< 0.05		< 4.18			
O19	DL04	11018	36.0	0.47		4.37			

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	TH-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	NI (mg/kg)
O19	DL04	11019	37.0	0.31		< 4.83			
O19	DL04	11020	38.0	< 0.10		< 3.71			
O19	DL04	11022	39.0	0.35		< 3.73			
O19	DL04	11023	40.0	0.23 J	0.82	0.87 J	0.0074	0.0027 UJ	7.9
O19	DL05	11032	22.0	0.25		4.67			
O19	DL05	11033	23.0	0.21		< 4.77			
O19	DL05	11034	24.0	0.30		4.96 J			
O19	DL05	11035	25.0	0.23		3.96			
O19	DL05	11036	26.0	0.26		5.15			
O19	DL05	11037	27.0	0.27		5.33			
O19	DL05	11038	28.0	0.21		12.55			
O19	DL05	11041	29.0	< 0.03		< 5.22			
O19	DL05	11042	30.0	0.23		10.96			
O19	DL05	11043	31.0	0.22		4.30			
O19	DL05	11044	32.0	0.21		< 4.95			
O19	DL05	11045	33.0	0.25		< 4.53			
O19	DL05	11046	34.0	0.35		< 4.39			
O19	DL05	11049	35.0	0.31		< 4.23			
O19	DL05	11050	36.0	0.30		9.14			
O19	DL05	11051	37.0	0.39		7.81			
O19	DL05	11052	38.0	< 0.05		< 3.80			
O19	DL05	11055	39.0	0.21		< 2.35			
O19	DL05	11056	40.0	0.16 U	1.44 J	1.31	0.0042	0.0026 UJ	3.1 J
O20	DL13	11335	20.0	0.18		< 3.87			
O20	DL13	11336	21.0	0.21		3.35 J			
O20	DL13	11338	22.0	0.18		< 3.14			
O20	DL13	11340	23.0	0.22		< 3.83			
O20	DL13	11341	24.0	0.30		< 3.89			
O20	DL13	11343	25.0	0.21		< 4.74			
O20	DL13	11344	26.0	0.27		< 3.42			
O20	DL13	11345	27.0	0.27		< 4.30			
O20	DL13	11347	28.0	0.23		< 4.48			
O20	DL13	11377	29.0	0.30		5.28			
O20	DL13	11378	30.0	0.26		< 3.35			
O20	DL13	11379	31.0	0.26		< 4.13			
O20	DL13	11380	32.0	0.17		< 3.09			
O20	DL13	11390	33.0	0.23		7.48 J			
O20	DL13	11393	34.0	< 0.03		< 2.83			
O20	DL13	11394	35.0	0.31		< 2.78			
O20	DL13	11396	36.0	0.16		< 3.10			
O20	DL13	11397	37.0	0.21		< 2.97			
O20	DL13	11399	38.0	0.32		8.95 J			
O20	DL13	11402	39.0	0.21		< 3.58			
O20	DL13	11403	40.0	0.098 J	0.42 J	0.30 J	0.0026 U	0.0026 UJ	2.7 J
O20	DL14	11415	20.0	0.20		< 3.58			
O20	DL14	11416	21.0	0.33		< 4.24			
O20	DL14	11417	22.0	0.30		3.96			

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O20	DL14	11418	23.0	< 0.05		14.86			
O20	DL14	11419	24.0	0.21		14.32			
O20	DL14	11420	25.0	0.18		16.82			
O20	DL14	11421	26.0	0.21		11.16			
O20	DL14	11422	27.0	< 0.05		8.20			
O20	DL14	11423	28.0	< 0.05		< 5.48			
O20	DL14	11426	29.0	0.58		13.75			
O20	DL14	11427	30.0	< 0.08		11.82			
O20	DL14	11428	31.0	0.35		18.64			
O20	DL14	11429	32.0	< 0.04		13.62			
O20	DL14	11438	33.0	< 0.03		9.74			
O20	DL14	11439	34.0	0.28		15.75			
O20	DL14	11440	35.0	0.16		11.73			
O20	DL14	11441	36.0	0.19		8.84			
O20	DL14	11442	37.0	0.25		11.99			
O20	DL14	11443	38.0	0.28		10.11			
O20	DL14	11444	39.0	0.32		8.53			
O20	DL14	11445	40.0	0.14 J	4.06	4.00	0.0028 U	0.0028 UJ	13.1 J
P19	DL06	11134	22.0	0.21		< 2.96			
P19	DL06	11135	23.0	0.16		< 3.38			
P19	DL06	11136	24.0	0.24		< 1.53			
P19	DL06	11138	25.0	< 0.05		< 3.51			
P19	DL06	11139	26.0	0.24		< 3.66			
P19	DL06	11142	27.0	0.30		< 4.48			
P19	DL06	11143	28.0	0.26		6.45			
P19	DL06	11144	29.0	< 0.03		4.52			
P19	DL06	11145	30.0	0.15		< 3.07			
P19	DL06	11146	31.0	0.20		< 3.05			
P19	DL06	11147	32.0	0.21		< 3.30			
P19	DL06	11148	33.0	< 0.04		< 3.94			
P19	DL06	11149	34.0	< 0.05		4.23 J			
P19	DL06	11158	35.0	0.36		4.14 J			
P19	DL06	11159	36.0	0.30		< 4.14			
P19	DL06	11160	37.0	< 0.05		< 3.65			
P19	DL06	11161	38.0	0.19		< 3.60			
P19	DL06	11162	39.0	0.33		< 3.36			
P19	DL06	11163	40.0	0.16 U	0.34 J	0.24 J	0.0037	0.0026 UJ	4.7
P20	DL15	11466	20.0	< 0.06		< 3.60			
P20	DL15	11467	21.0	0.22		< 3.61			
P20	DL15	11468	22.0	0.22		< 4.13			
P20	DL15	11480	23.0	0.24		4.84			
P20	DL15	11474	24.0	0.25		14.97			
P20	DL15	11475	25.0	0.19 J		6.29			
P20	DL15	11477	26.0	0.20		7.44			
P20	DL15	11478	27.0	0.31		< 6.21			
P20	DL15	11479	28.0	0.23		14.28			
P20	DL15	11484	29.0	0.20		6.15			

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P20	DL15	11485	30.0	0.22		6.96			
P20	DL15	11486	31.0	0.31		< 4.08			
P20	DL15	11488	32.0	0.22		5.97 J			
P20	DL15	11492	33.0	0.41		< 5.86			
P20	DL15	11493	34.0	0.25		12.08			
P20	DL15	11494	35.0	< 0.03		< 4.26			
P20	DL15	11496	36.0	< 0.06		< 4.48			
P20	DL15	11500	37.0	0.21		5.67			
P20	DL15	11501	38.0	0.24		< 4.11			
P20	DL15	11505	39.0	< 0.08		< 3.79			
P20	DL15	11506	40.0	0.27 J	1.69	1.63	0.0026 U	0.0026 UJ	3.1 J

**Cell 11-Table 6
Systematic Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232	TCE - Trichloroethene
U-234 - Uranium-234	PCE - Tetrachloroethene
U-238 - Uranium-238	Ni - Nickel

Units:

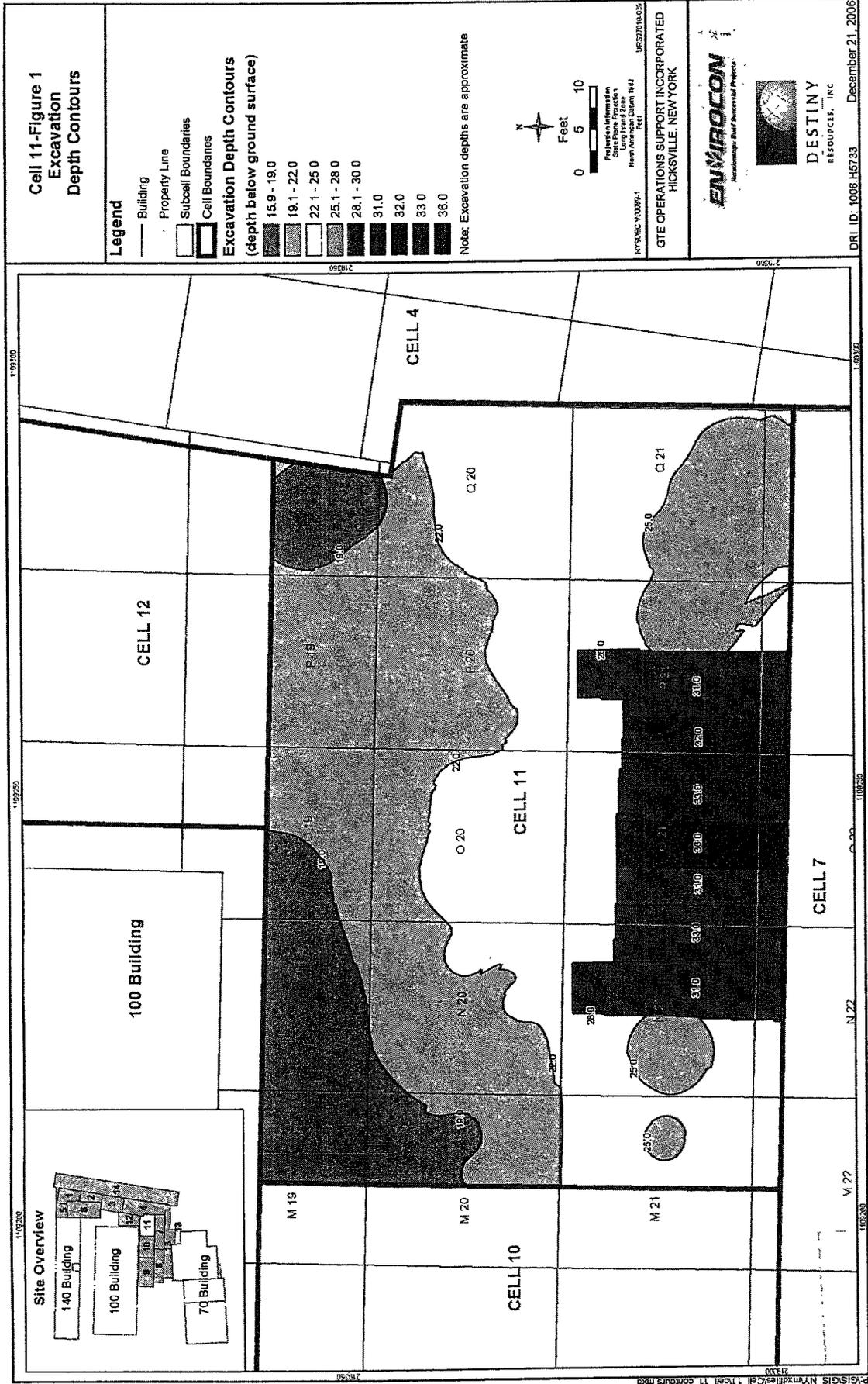
pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

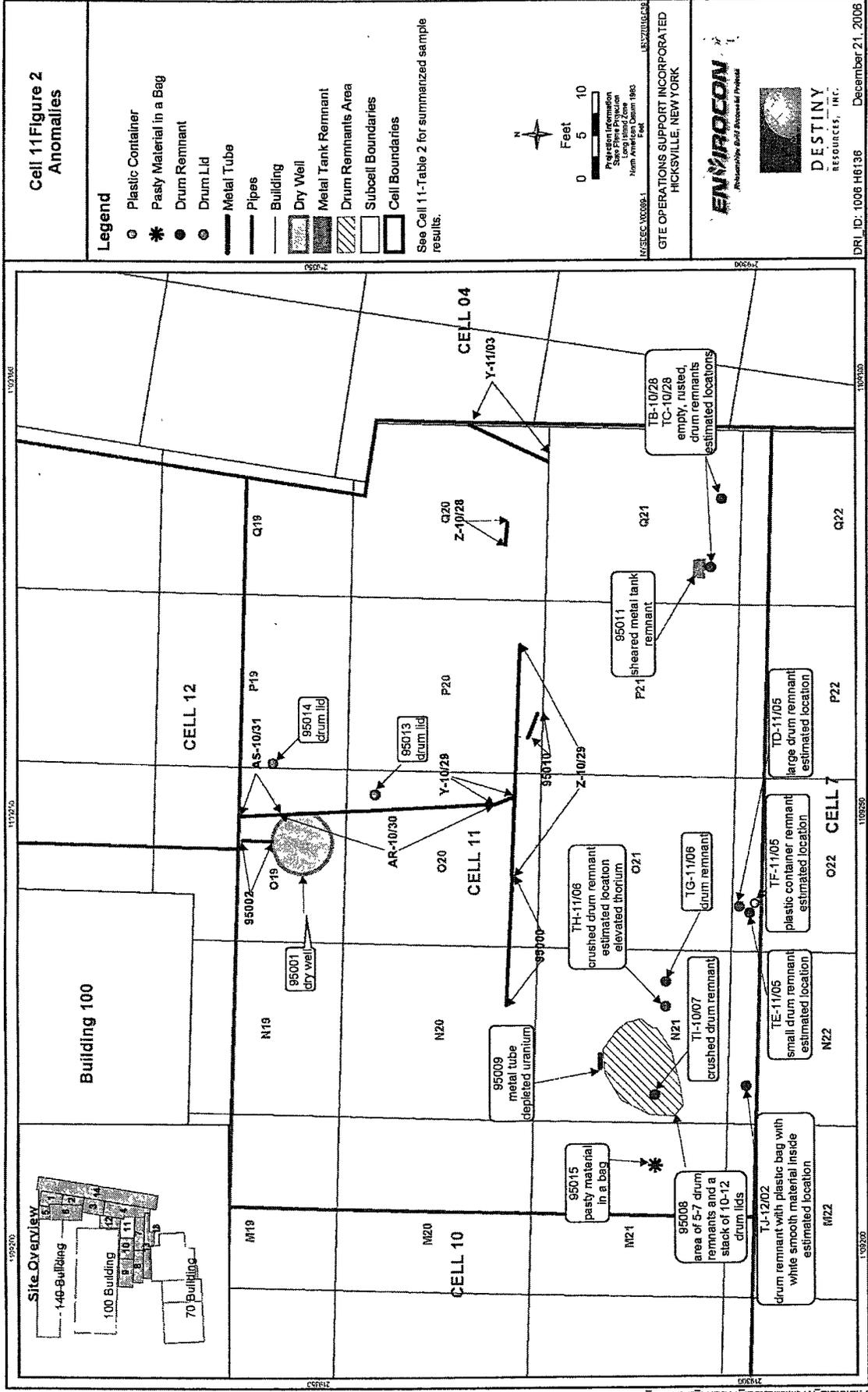
Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.
UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 11-Figure 7 for boring locations.
DL sample is analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.
SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.
Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.
Blank cell indicates analysis was not performed.
Boring initially called O19-DL06, subcell was corrected to P19.





**Cell 11-Figure 3
Post-Excavation
Gamma Radiation Walkover
Survey Results**

Legend

- Lower Population - 84% of data points
(0 - 3640 cpm)
- Middle Population - 4% of data points
(3641 - 4137 cpm)
- Upper Population - 2% of data points
(4138 - 4888 cpm)
- Building
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries



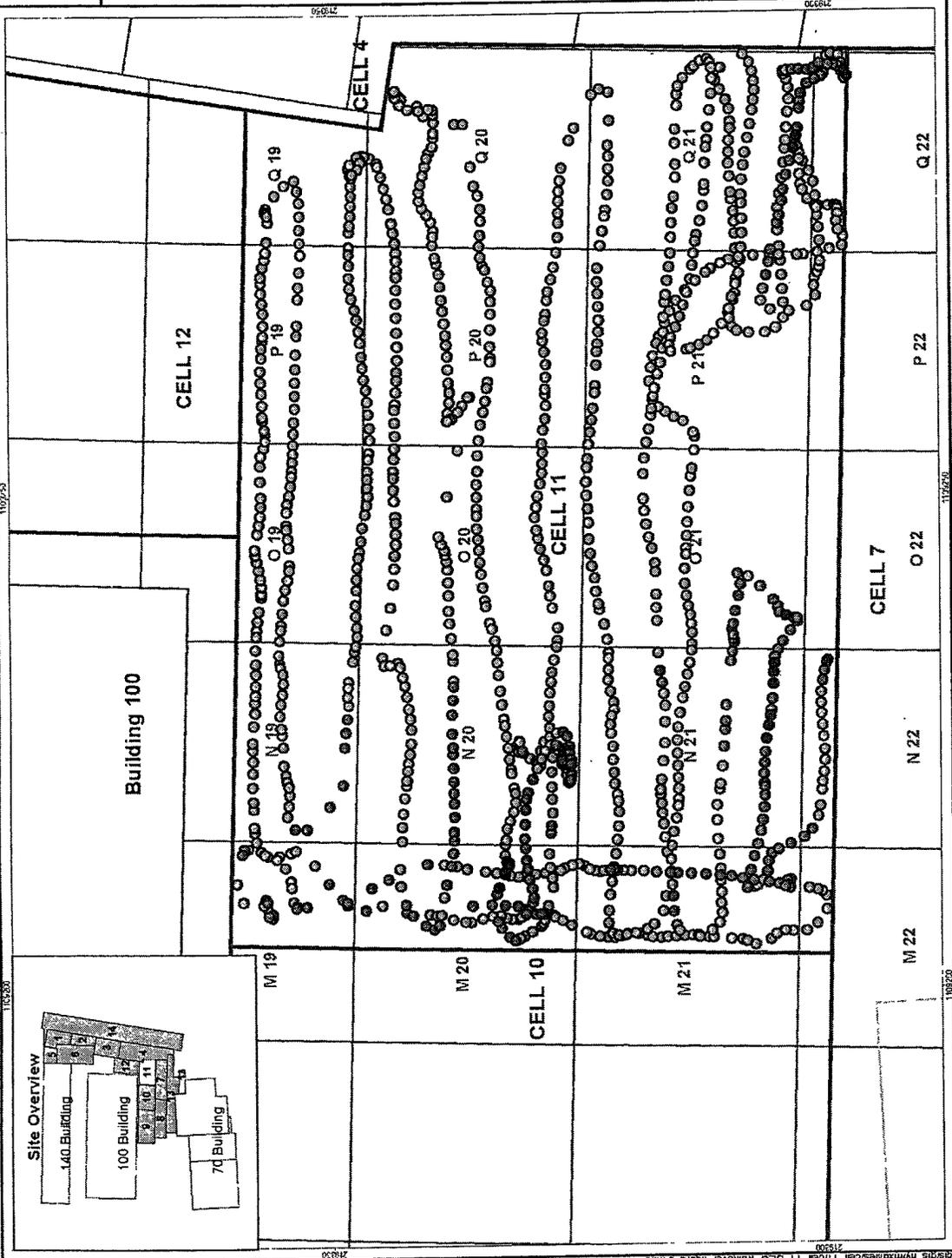
Projection Information
Site Plane Projection
North American Datum 1983
Feet

U.S. GEOLOGICAL SURVEY
GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK



**DESTINY
RADURETS, INC.**

DRI ID: 1006 H5721 December 21, 2006

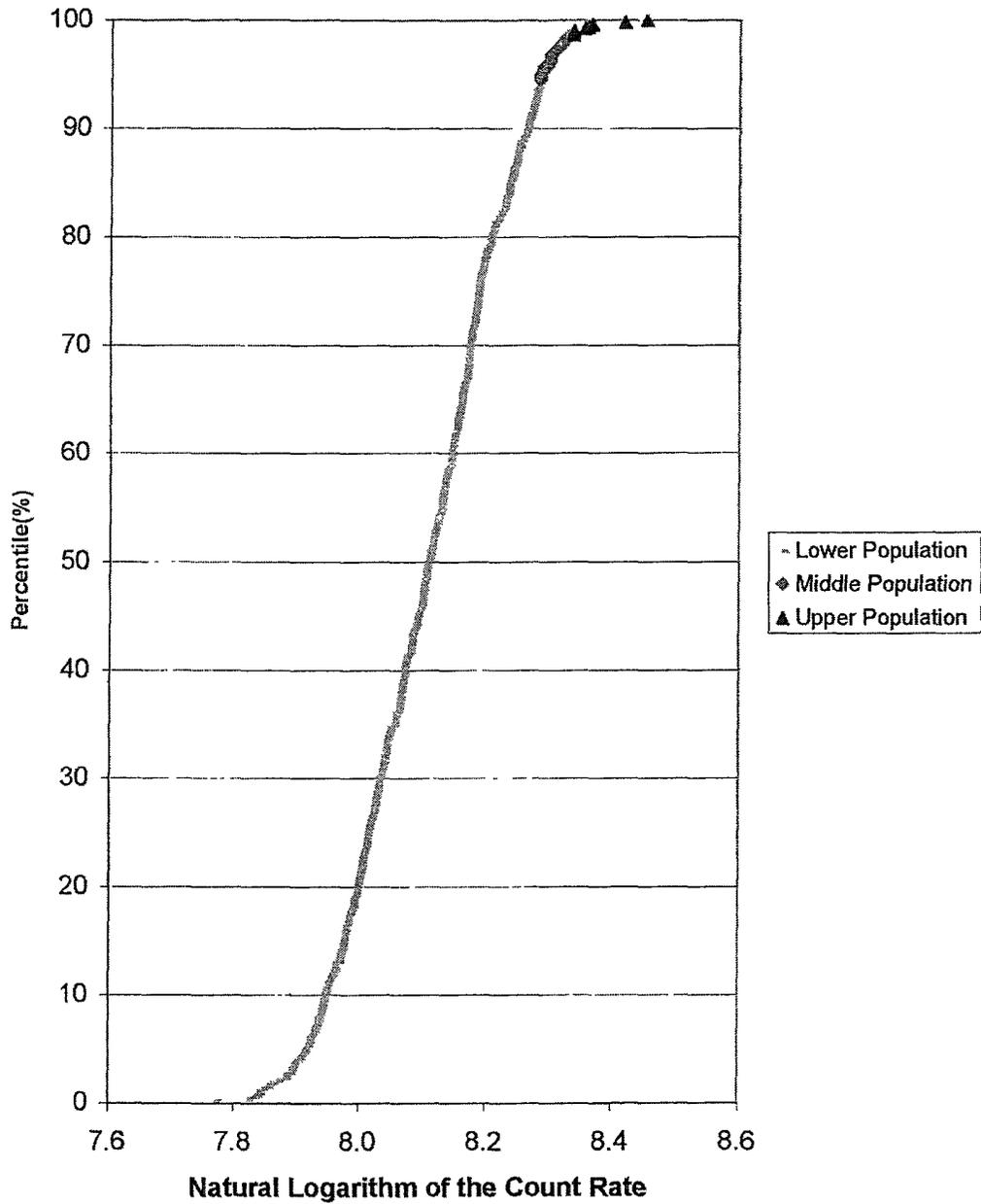


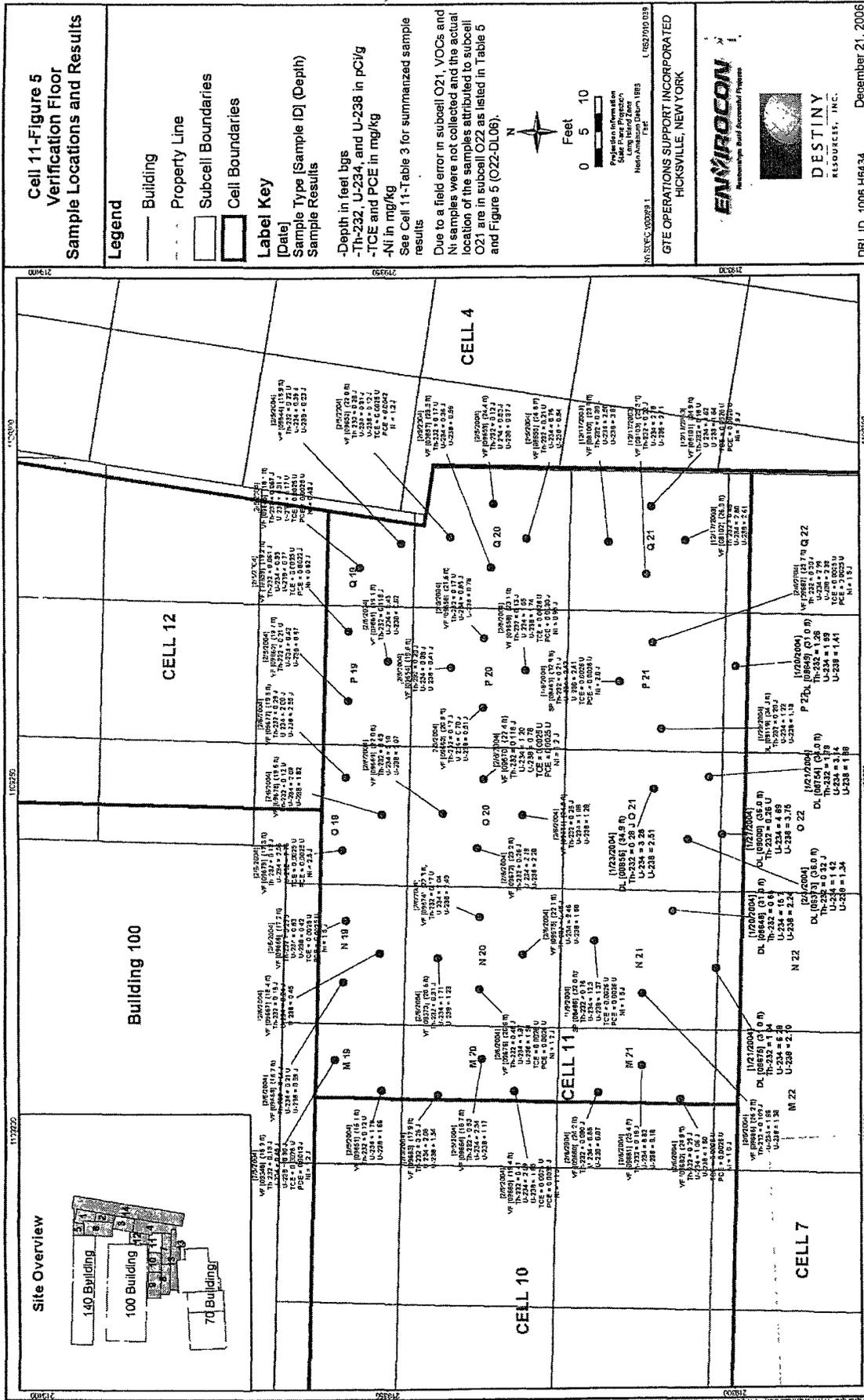
110725

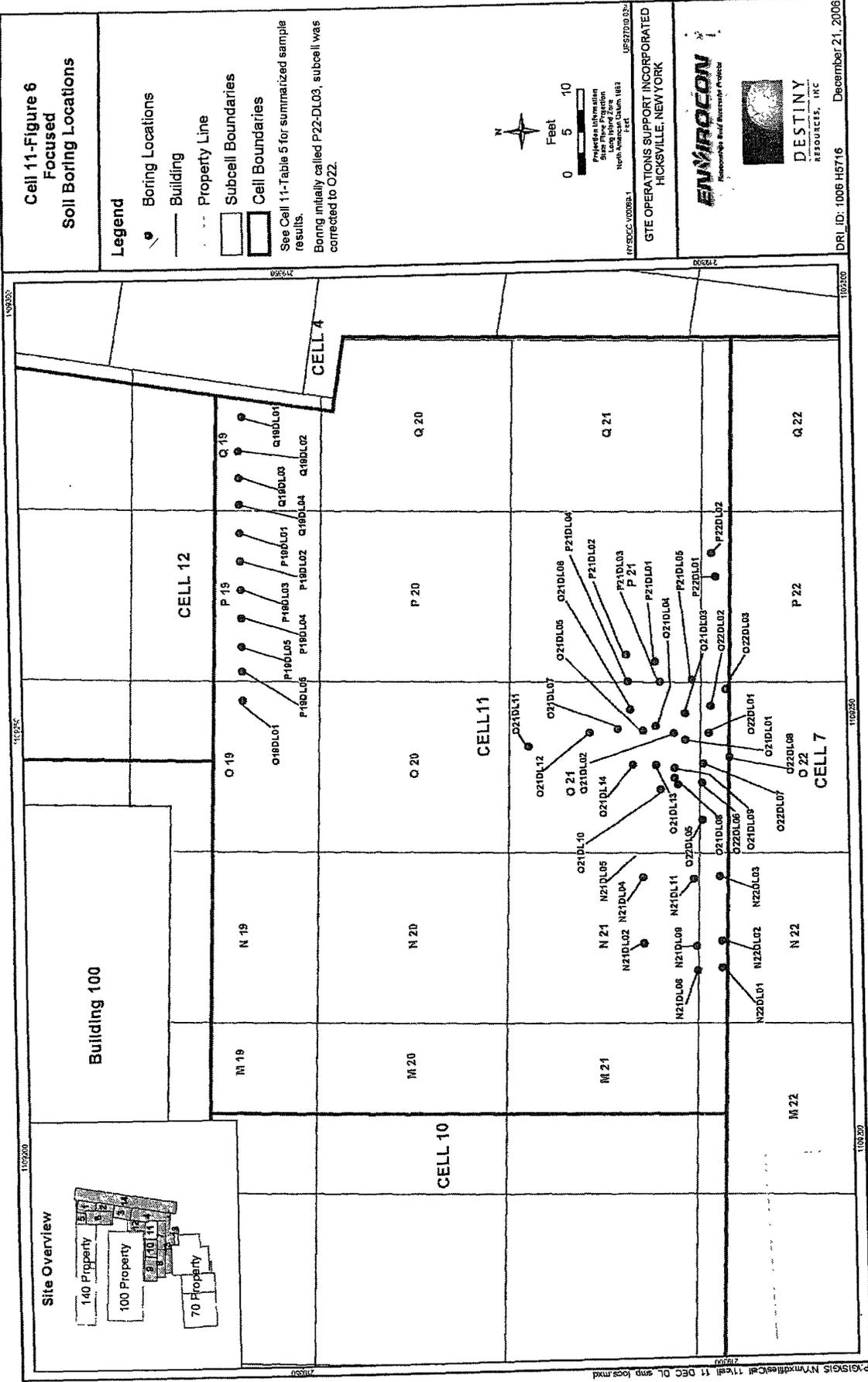
110720

110720

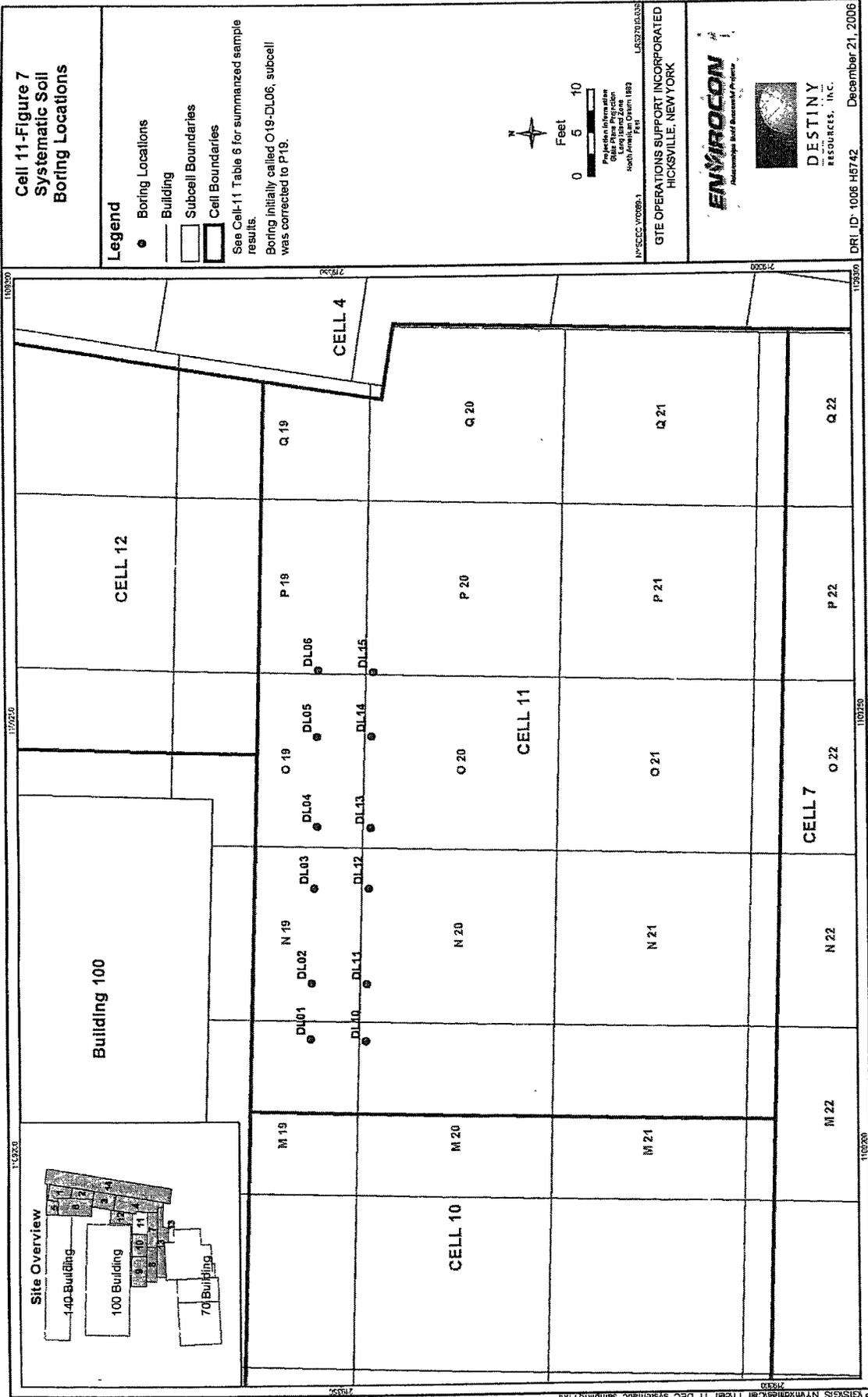
Cell 11-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Survey Data







GTES0003551



P:\GIS\GIS N\Y\N\X\Cell 11\Fig 11 DEC systematic sampling.mxd
11/03/06



"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc:
Subject: Cells 5,10,11 and Cell 12 units O18,19, P18, P19, Q18, Q19

05/12/2004 03:54 PM

We have conducted walkover surveys of Cells 5,10,11,12 (units O,P, and Q 18-19) and reviewed the CF/VF sample data including the DL samples from the subsurface soil boreholes. We agree that these results are below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore we have no objection to backfilling these cells. Upon receipt and review of your data packages for these cells and receipt of the sample results from our contract lab, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003553

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • FAX: (631) 444-0248
Website: www.dec.state.ny.us



January 5, 2004

Jean Agostinelli
GTE Operations Support, Inc.
170 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard, December 20, 2003
Former Sylvania Electric Products Facility, Site # V00089-1

Dear Ms. Agostinelli:

The Department has reviewed the December 20, 2003 report concerning the borrow soils from the Spagnoli Road area. Based on the data in this report, the Department finds these soils to be acceptable for use as backfill at the Former Sylvania Electric Products Facility site in Hicksville.

If you have any questions, please call me at (631) 444-0244.

Sincerely,



Robert R. Stewart
Environmental Engineer I
Environmental Engineer I

cc: W. Parish
J. Riggi

Attachment B
Page 1 of 1

GTES0003554

Cell 11 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 11, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 11 consists of all or portions of subcells M19 to Q19, M20 to Q20, M21 to Q21, and M22 to Q22. (Since less than 25 percent of subcells M22 to Q22 are in Cell 11, portions of these subcells north of the sheet pile wall are considered part of subcells M21 to Q21, respectively, for purposes of this evaluation.) The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 11 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 51 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern. The sample results for each of the 51 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 11 (Attachment page 6), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 51 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 11 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 4 of the report (Attachment page 11) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.19. As is explained in Section 10.1.1, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 11

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
09648	0.13 J	0.45 J	0.3 J
09651	0.12 U	1.78	1.66
09663	0.26 J	2.08	1.54
09664	0.53	2.34	1.17
09665	0.41	2.09	1.65
09680	0.08 J	6.65	6.07
09681	0.18 J	8.82	9.18
09682	0.25 J	1.06 J	1.6
09666	0.25 J	0.63	0.42
09667	0.16 J	0.24 J	0.45
09668	0.14 J	0.21 U	0.39 J
09673	0.31 J	1.71	1.23
09674	0.17 U	2.04	2.49
09675	0.45 J	2.46	1.5
09676	0.48 J	1.87	1.54
08486	0.76	12.3	1.37
08648	0.66	15.7	2.24
08675	1.04	6.28	2.1
09686	0.109 J	1.68	1.38
09677	0.29 J	2 J	2.55 J
09678	0.12 U	2.09	1.82
09679	0.13 J	2.56	2.76
09669	0.43	3.1	2.07
09670	0.118 J	1.2	0.78
09671	0.26 J	1.08	1.28
09672	0.26 J	2.19	2.2
08856	0.28 J	3.28	2.51
08754	1.79	3.14	1.88
09000	0.26 U	4.69	3.75
09373	0.32 J	1.42	1.34
09659	0.061 J	0.93	0.77
09661	0.118 J	0.43	0.62
09662	0.21 U	0.42	0.67
09654	0.2 J	0.33 J	0.41 J
09656	0.17 U	0.85 J	0.76
09658	0.13 J	1.65	1.74
09660	0.17 J	0.7 J	0.51 J
08463	0.21 J	2.43	2.41
09687	0.3 J	2.99	2.33
08649	1.26	1.59	1.41
09119	0.2 J	1.22	1.13
09644	0.22 U	0.39 J	0.23 J
09645	0.067 J	0.31 J	0.17 U
09652	0.28 J	0.31 J	0.12 J

Table C.1

Cell 11

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
09653	0.12 J	0.53 J	0.37 J
09655	0.21 U	0.76	0.54
09657	0.17 U	0.36 J	0.56
08100	0.3 J	2.5	3.67
08101	0.18 U	1.62	1.64
08102	0.48	2.8	2.61
08103	0.22 J	2.78	2.71

Notes:

Cell area = 497 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

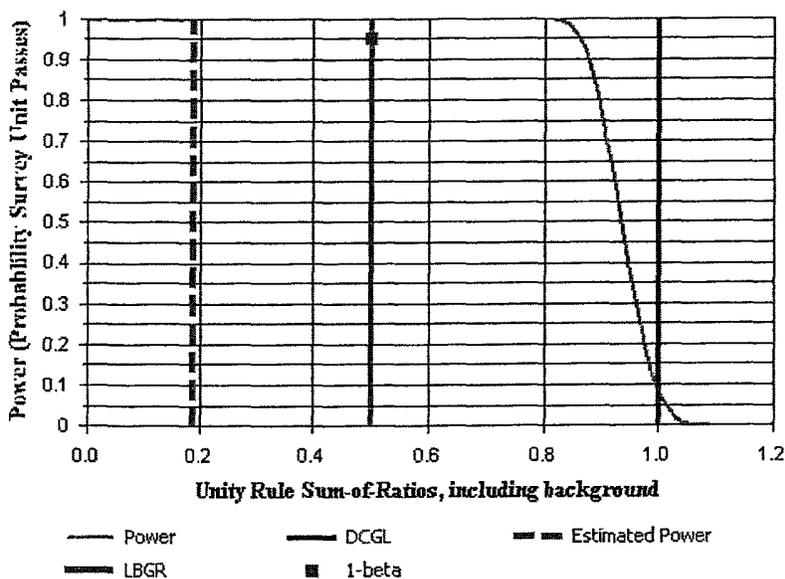


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 11 Status Report with STL Data		
Comments:			
Area (m ²):	497	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.13
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.19
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.3 \pm 0.3	N/A
U-234	2.4 \pm 2.9	N/A
U-238	1.7 \pm 1.5	N/A

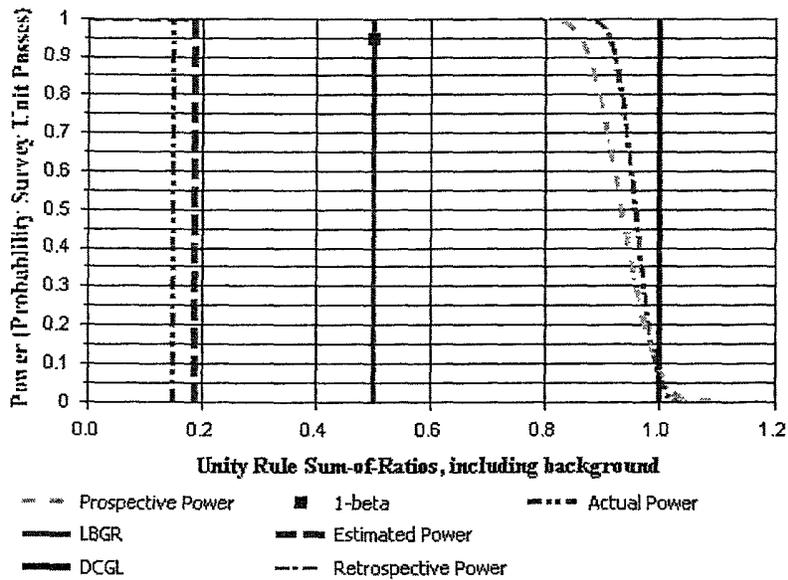


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 11 Status Report with STL Data
Report Number: 1
Survey Unit Samples: 51
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
09648	S	0.13	0.45	0.3
09651	S	0.12	1.78	1.66
09663	S	0.26	2.08	1.54
09664	S	0.53	2.34	1.17
09665	S	0.41	2.09	1.65
09680	S	0.08	6.65	6.07
09681	S	0.18	8.82	9.18
09682	S	0.25	1.06	1.6
09666	S	0.25	0.63	0.42
09667	S	0.16	0.24	0.45
09668	S	0.14	0.21	0.39
09673	S	0.31	1.71	1.23
09674	S	0.17	2.04	2.49
09675	S	0.45	2.46	1.5
09676	S	0.48	1.87	1.54
08486	S	0.76	12.3	1.37
08648	S	0.66	15.7	2.24
08675	S	1.04	6.28	2.1
09686	S	0.11	1.68	1.38
09677	S	0.29	2	2.55
09678	S	0.12	2.09	1.82
09679	S	0.13	2.56	2.76
09669	S	0.43	3.1	2.07
09670	S	0.12	1.2	0.78
09671	S	0.26	1.08	1.28
09672	S	0.26	2.19	2.2
08856	S	0.28	3.28	2.51
08754	S	1.79	3.14	1.88
09000	S	0.26	4.69	3.75
09373	S	0.32	1.42	1.34
09659	S	0.06	0.93	0.77
09661	S	0.12	0.43	0.62
09662	S	0.21	0.42	0.67
09654	S	0.2	0.33	0.41
09656	S	0.17	0.85	0.76
09658	S	0.13	1.65	1.74
09660	S	0.17	0.7	0.51
08463	S	0.21	2.43	2.41
09687	S	0.3	2.99	2.33
08649	S	1.26	1.59	1.41
09119	S	0.2	1.22	1.13
09644	S	0.22	0.39	0.23
09645	S	0.07	0.31	0.17
09652	S	0.28	0.31	0.12
09653	S	0.12	0.53	0.37
09655	S	0.21	0.76	0.54
09657	S	0.17	0.36	0.56
08100	S	0.3	2.5	3.67
08101	S	0.18	1.62	1.64
08102	S	0.48	2.8	2.61
08103	S	0.22	2.78	2.71



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
09648	S	0.06
09651	S	0.11
09663	S	0.17
09664	S	0.26
09665	S	0.22
09680	S	0.28
09681	S	0.42
09682	S	0.14
09666	S	0.11
09667	S	0.07
09668	S	0.06
09673	S	0.17
09674	S	0.15
09675	S	0.24
09676	S	0.24
08486	S	0.54
08648	S	0.59
08675	S	0.54
09686	S	0.1
09677	S	0.19
09678	S	0.12
09679	S	0.15
09669	S	0.26
09670	S	0.08
09671	S	0.14
09672	S	0.18
08856	S	0.22
08754	S	0.74
09000	S	0.26
09373	S	0.17
09659	S	0.06
09661	S	0.06
09662	S	0.1
09654	S	0.09
09656	S	0.09
09658	S	0.11
09660	S	0.08
08463	S	0.17
09687	S	0.21
08649	S	0.51
09119	S	0.12
09644	S	0.09
09645	S	0.03
09652	S	0.11
09653	S	0.06
09655	S	0.1
09657	S	0.08
08100	S	0.23
08101	S	0.13
08102	S	0.28
08103	S	0.19



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	51	N/A	N=13
Mean (SOR)	0.19	N/A	0.19
Median (SOR)	0.15	N/A	N/A
Std Dev (SOR)	0.15	N/A	0.13
High Value (SOR)	0.74	N/A	N/A
Low Value (SOR)	0.03	N/A	N/A

Cell 12 Status Report

INTRODUCTION

Cell 12 was originally comprised of all or portions of subcells O15 to O19, P15 to P19, Q15 to Q19 and R15 to R16; however, only subcells O18, O19, P18, P19, Q18 and Q19 were excavated and evaluated. Cell 12 is located on the east side of the 100 Property (Cell 12-Figure 1 and Figure 6 in Volume I). Excavation of Cell 12 began on October 9, 2003 and was completed on February 5, 2004. Verbal approval to backfill Cell 12 was received from NYSDEC representatives on February 11, 2004 and documented in an e-mail on May 12, 2004 (Cell 12-Attachment A). A formal request to backfill Cell 12 was submitted in a report to NYSDEC titled *Cell 12, Subcells O18, O19, P18, P19, Q18 and Q19 – Attainment of Radiological and Chemical Cleanup Levels* dated April 22, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated subcells.

Cell 12 was backfilled beginning February 13, 2004 and was completed on March 2, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York (Spagnoli 1). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. The survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard*, dated December 20, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated January 5, 2004 (Cell 12-Attachment B).

Excavation of Cell 12 north of subcells O18, P18 and Q18 may be completed at a later date, if necessary, with subsequent phases of work. Excavation of these subcells during Phase I would have prevented the use of the vehicle and equipment access door into the 100 Building (adjacent to subcells O15 and O16). Limited excavation was performed to provide a ramp that was used to support access of personnel and excavation equipment to portions of Cell 12. Backfilling of subcells O18, O19, P18, P19, Q18 and Q19 was performed after placing an orange plastic snow fence on the excavated surfaces to aid in the identification of the backfill-unexcavated soil interface in the future.

DEPTHS OF EXCAVATION

Cell 12, subcells O18, O19, P18, P19, Q18 and Q19, was excavated to depths ranging from 14 to 26 ft bgs. The excavation depths for each subcell are provided in Cell 12-Table 1 and are shown on Cell 12-Figure 1. (See Section 6.2.4 of Volume I for a description of how the excavation depths are determined.) A total of 6,051,090 pounds of soil and debris (288 Lift Liners™) were removed from Cell 12 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 12, three anomalies were encountered. The anomalies were pieces of pipe. A list of Cell 12 anomalies along with analytical results from anomaly samples is provided in Cell 12-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 12-Figure 2. All of the anomalies encountered during the excavation activities in Cell 12 were sized to fit and placed in Lift Liners™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 12, a gamma radiation walkover survey was performed in accessible areas of subcells O18, O19, P18, P19, Q18 and Q19 and also included the southern portion of O17, P17 and Q17. The walkover covered most areas of the cell floor; however, as shown on Cell 12-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 12-Figure 4 depicts a CFD plot of the 162 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 12-Figure 5) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Cell 12-Attachment C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the exceptions given below:

- O18 – The A, B, and C samples were not collected. SP samples were used in lieu of the A and B samples. A DL sample was used in lieu of the C sample.

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

FOCUSED SOIL SAMPLING

To confirm that the final excavation depths were adequate, focused soil sampling was performed along the south wall of Cell 12 in subcells O19, P19, and Q19 and along the southern portion of the west wall of Cell 12 in subcells O17, O18 and O19 (Cell 12-Figure 6). A total of 18 soil borings were completed prior to the end of Phase I and reported in Cell 12- Table 5.

The data generated after the Phase I soil remediation from the focused soil sampling in Cell 12 were submitted to NYSDEC in *Subsurface Soil Sampling and Analysis Report, Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation*, Rev 1: October 2005.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 12-Table 3 and are shown on Cell 12-Figure 5. Cell 12-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the focused soil samples are provided in Cell 12-Table 5 and the boring locations are shown on Cell 12-Figure 6.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 12, subcells O18, O19, P18, P19, Q18 and Q19, passed this evaluation (Cell 12-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

CONCLUSION

Cell 12 was originally comprised of all or portions of subcells O15 to O19, P15 to P19, Q15 to Q19 and R15 to R16; however, only subcells O18, O19, P18, P19, Q18 and Q19 were excavated and evaluated. Based on STL VF sample results, the radiological and chemical Site cleanup levels for subcells O18, O19, P18, P19, Q18 and Q19 were attained for Cell 12.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 12-Table 1:	Cell 12 Subcell Excavation Depths
Cell 12-Table 2:	Cell 12 Anomaly Sample Results
Cell 12-Table 3:	Cell 12 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 12-Table 4:	Cell 12 Maximum Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 12-Table 5:	Cell 12 Focused Soil Boring Sample Results

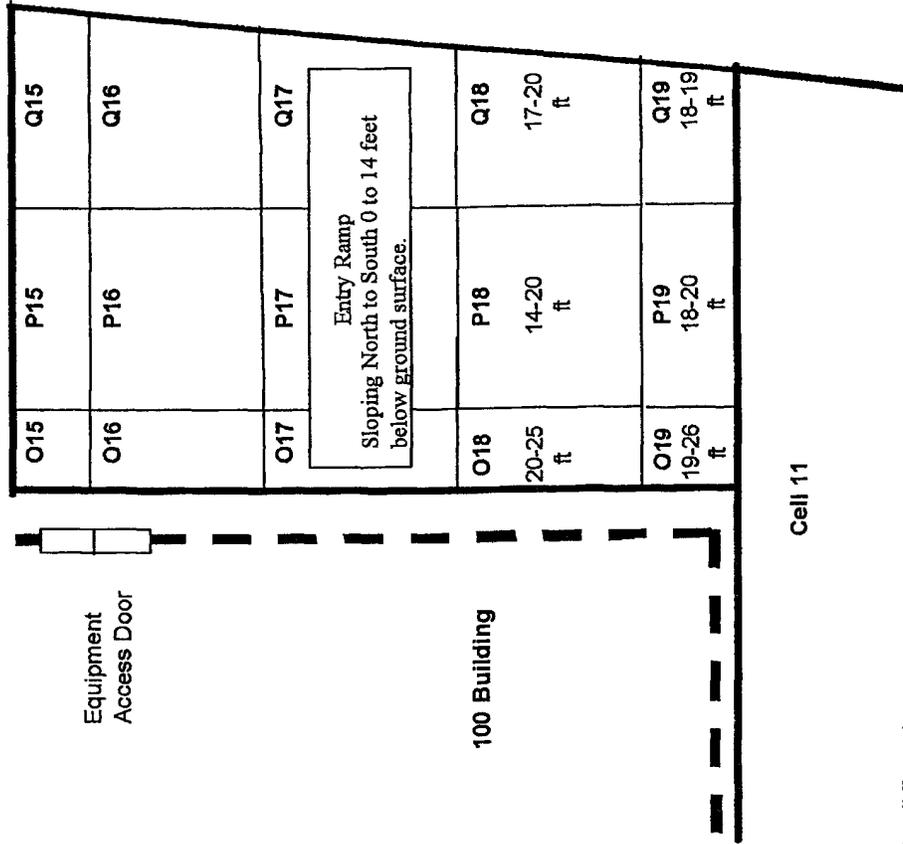
Figures

Cell 12-Figure 1:	Cell 12 Excavation Depth Contours
Cell 12-Figure 2:	Cell 12 Anomalies
Cell 12-Figure 3:	Cell 12 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 12-Figure 4:	Cumulative Frequency Distribution for Cell 12 Gamma Radiation Walkover Survey Data
Cell 12-Figure 5:	Cell 12 Verification Floor Sample Locations and Results
Cell 12-Figure 6:	Cell 12 Focused Soil Boring Locations

Attachments

Cell 12-Attachment A:	E-Mail from NYSDEC to GTEOSI dated May 12, 2004
Cell 12-Attachment B:	Letter from NYSDEC to GTEOSI dated January 5, 2004
Cell 12-Attachment C:	Cell 12, Subcells O18, O19, P18, P19, Q18 and Q19 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 12-Table 1
Subcell Excavation Depths**



- Notes:**
- Subcell Boundary
 - Cell Boundary
 - - - Building Boundary

**Cell 12-Table 2
Anomaly Sample Results**

Sample ID	Date	Sample Type	Material	Dimensions (in)	Count Rate (cpm)	Background (cpm)	Net Count Rate (cpm)	Standard Deviation (SD) (cpm)	Count Rate (dpm/100 cm ²)	Background (dpm/100 cm ²)	Net Count Rate (dpm/100 cm ²)	Standard Deviation (SD) (dpm/100 cm ²)	Remarks
Pipe	10/13/2003	AF-10/13	Metal	7.5 (L) x 7 (dia)	8.58	NS	8.58	0.32 (STL)	NS	NS	8.58	0.32 (STL)	Encountered during entry stopping
Pipe	10/13/2003	AF-10/13	Metal	7.5 (L) x 7 (dia)	NS	NS	NS	0.107 U (STL)	NS	NS	0.107 U	0.007 J (STL)	Encountered during entry stopping. Not enough made for Gamma Spec. sample. One gamma count rate for samples 05505, 05507
Pipe	10/13/2003	AS-10/13	Metal	7.5 (L) x 7 (dia)	7.80	NS	7.80	0.72 J (STL)	NS	NS	7.80	0.10 (STL)	Encountered during entry stopping
Pipe	10/13/2003	AS-10/13	Metal	7.5 (L) x 7 (dia)	NS	NS	NS	10.824 D (STL)	NS	NS	10.824 D	0.118 U (STL)	Encountered during entry stopping. Not enough made for Gamma Spec. sample. One gamma count rate for samples 05506, 05508
Pipe	10/17/2003	AK-10/17	Tile	4 (L) x 5 (dia)	7.80	NS	7.80	0.52 (STL)	18	NS	7.80	0.101 U (STL)	
Pipe	10/17/2003	AK-10/17	Tile	4 (L) x 5 (dia)	9.70	NS	9.70	0.85 (STL)	18	NS	9.70	0.098 U (STL)	

Analyses:
 Th-232 - Thorium-232
 U-234 - Uranium-234
 U-235 - Uranium-235
 U-238 - Uranium-238
 TCE - Trichloroethene
 PCE - Tetrachloroethene
 Ni - Nickel

Units:
 cpm - counts per minute
 dpm/100 cm² - disintegrations per minute/100 square centimeters

Qualifiers:
 U - Validation qualifier used to indicate that the result was qualified as non-detect.
 J - Validation qualifier used to indicate that the result is considered an estimate.
 UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.
 < - Validation qualifier (for on-site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:
 See Cell 12-Figure 2 for sample locations
 Samples were analyzed on-site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system, visible organic compounds (TCE and PCE) by solid phase microextraction and capillary gas chromatography by Stone Environmental, Inc.
 NA - Analysis was not performed.
 NS - Not sampled
 Due to an error in the laboratory data reporting program, the on-site analytical data should be interpreted as two significant figures

**Cell 12-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
O18	A*	09847	20.0	0.20 J	0.54 J	0.45 J	0.0026 U	0.0027	1.3 J
O18	B*	09848	20.0	0.19 J	0.54 J	0.27 J	0.0026 U	0.0031	1.7 J
O18	C*	09283	24.0	0.22 J	1.05 J	0.99			
P18	A	09408	14.9	0.32 J	0.86 J	0.67 J			
P18	B	09409	14.7	0.32 J	0.76 J	1.04	0.0026 U	0.00066 J	1.5 J
P18	C	09410	18.0	0.13 U	0.52 J	0.68 J			
P18	D	09411	20.0	0.135 J	0.29 J	0.46 J			
P19	A	09407	18.0	0.17 U	0.49 J	0.42 J	0.0025 U	0.0025 U	0.95 J
Q18	A	09849	18.5	0.24 J	0.28 J	0.34 J			
Q18	B	09850	20.0	0.14 J	0.35 J	0.27 J	0.0025 U	0.0023 J	0.51 J
Q18	C	09851	19.0	0.15 U	0.75 J	0.52 J			
Q18	D	09852	19.0	0.25 U	0.35 J	0.29 J			
Q19	A	09406	18.0	0.21 J	0.48 J	0.42 J	0.0026 U	0.0026 U	0.69 J

Analytes:

Th-232 - Thorium-232

TCE - Trichloroethene

U-234 - Uranium-234

PCE - Tetrachloroethene

U-238 - Uranium-238

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 12-Figure 5 for sample information.

Blank cell indicates analysis was not performed.

* - SP and DL samples selected to represent VF samples. For sample ID number 09847 (subcell O18, location A*) and for sample ID number 09848 (subcell O18, location B*), SP samples taken from test pits were used. For sample ID number 09283 (subcell O18, location C*), sample was obtained from a boring (DL sample).

**Cell 12-Table 4
Maximum Verification Floor Sample Results
Severn Trent Laboratories, Inc.**

Analyte	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	0.32 J	14.7	P18
		14.9	P18
Maximum U-234 (pCi/g)	1.05 J	24.0	O18
Maximum U-238 (pCi/g)	1.04	14.7	P18
Maximum TCE (mg/kg)	0.0026 U	20.0	O18
		14.7	P18
		18.0	Q19
Maximum PCE (mg/kg)	0.0031	20.0	O18
Maximum Ni (mg/kg)	1.7 J	20.0	O18

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

**Cell 12-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (ft)	Hr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCF (mg/kg)	PCF (mg/kg)	Ni (mg/kg)
O17	C12	06983	25.0	0.15		< 4.96	0.0026 U	0.00034 J	3.1 J
O18	DL01	09283	24.0	0.22 J	1.05 J	0.99			
O18	DL01	09284	25.0	0.23		< 2.87			
O18	DL01	09285	26.0	0.17 U	0.54 J	0.57 J	0.0026 U	0.0026 U	3.4 J
O18	DL01*	09183	25.0	0.15		3.40			
O18	DL01*	09184	26.0	0.16		4.97 J			
O18	DL01*	09185	27.0	0.27		< 2.76			
O18	DL01*	09186	28.0	< 0.03		8.79			
O18	DL01*	09187	29.0	0.17		5.93			
O18	DL01*	09188	30.0	0.20 J	1.0 J	1.24	0.0026 U	0.0026 U	4.5 J
O18	C12	06999	25.0	0.22		< 2.83	0.0026 U	0.00082 J	5.6
O19	DL02	09189	23.0	0.19		< 2.70			
O19	DL02	09190	24.0	0.13		< 2.50			
O19	DL02	09191	25.0	0.17		< 2.55			
O19	DL02	09192	26.0	0.27		3.99			
O19	DL02	09197	27.0	0.21		< 2.96			
O19	DL02	09198	28.0	< 0.02		< 2.16			
O19	DL02	09199	29.0	0.16		< 3.11			
O19	DL02	09200	30.0	0.36 J	1.90	1.73	0.0026 U	0.0026 U	5.3 J
O19	DL03	09271	25.0	< 0.04		36.77			
O19	DL03	09272	26.0	0.18		18.23	0.098 U	0.098 U	
O19	DL03	09310	27.0	0.25 J	10.9	11.2	0.0026 U	0.0026 U	6.9
O19	DL04	09268	24.0	0.28		25.25			
O19	DL04	09269	25.0	< 0.06		4.10 J			
O19	DL04	09270	26.0	0.17 U	5.22	4.55	0.0026 U	0.0026 U	5.2
O19	DL05	09280	24.0	0.20		9.44			
O19	DL05	09281	25.0	0.16		16.29			
O19	DL05	09282	26.0	0.14 U	8.96	9.5	0.0026 U	0.0026 U	4.8
O19	DL06	09416	24.0	0.29		7.04			
O19	DL06	09417	25.0	0.33		13.89 J			
O19	DL06	09418	26.0	0.088 J	5.08	5.51	0.0026 U	0.0026 U	6.7
O19	DL07	09412	23.0	0.20		2.90 UJ			
O19	DL07	09413	24.0	0.23		< 3.10			
O19	DL07	09414	25.0	< 0.05		< 3.44			
O19	DL07	09415	26.0	0.18 J	1.97	2.18	0.0026 U	0.0026 U	5.9
P19	DL01	09403	24.0	0.18		2.57 J			
P19	DL01	09404	25.0	0.21		4.84			
P19	DL01	09405	26.0	0.14 U	0.47 J	0.29 J	0.0026 U	0.0026 U	2.2 J
P19	DL02	09399	23.0	0.18		2.30 UJ			
P19	DL02	09400	24.0	0.17		< 2.30			
P19	DL02	09401	25.0	0.19		2.70 J			
P19	DL02	09402	26.0	0.18 U	0.43 J	0.46	0.0026 U	0.0026 U	4.4
P19	DL03	09494	19.0	< 0.05		2.88 UJ			
P19	DL03	09495	20.0	0.19		< 2.74			

**Cell 12-Table 5
Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	U-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
P19	DL03	09496	21.0	0.17		< 2.58			
P19	DL03	09497	22.0	0.16		2.78 J			
P19	DL03	09498	23.0	0.17		3.57 J			
P19	DL03	09504	24.0	0.20		< 2.60			
P19	DL03	09509	25.0	0.15		2.94 J			
P19	DL03	09524	26.0	0.19 J	0.31 J	0.36 J	0.0026 U	0.00036 J	1.4 J
P19	DL04	09515	19.0	0.20		< 2.30			
P19	DL04	09517	20.0	0.16		< 1.80			
P19	DL04	09518	21.0	0.19		2.42 J			
P19	DL04	09520	22.0	0.18		< 2.57			
P19	DL04	09521	23.0	< 0.04		< 2.83			
P19	DL04	09522	24.0	0.21		3.30 J			
P19	DL04	09526	25.0	0.13		< 2.06			
P19	DL04	09527	26.0	0.23 J	0.26 J	0.22 J	0.0026 U	0.00040 J	2.9 J
P19	DL01**	09536	19.0	0.26		< 3.66			
P19	DL01**	09537	20.0	0.21		< 2.25			
P19	DL01**	09538	21.0	0.16		2.95 J			
P19	DL01**	09543	22.0	0.19		< 3.24			
P19	DL01**	09544	23.0	< 0.05		3.16 J			
P19	DL01**	09555	24.0	0.19		2.83 J			
P19	DL01**	09557	25.0	0.17		< 3.33			
P19	DL01**	09583	26.0	0.17 J	0.23 U	0.28 J	0.0026 U	0.0026 U	1.9 J
Q19	DL02	09511	19.0	0.30		< 2.30			
Q19	DL02	09512	20.0	0.20		3.23 J			
Q19	DL02	09513	21.0	0.19		6.00 J			
Q19	DL02	09514	22.0	0.23		3.06 UJ			
Q19	DL02	09529	23.0	< 0.03		< 2.54			
Q19	DL02	09531	24.0	0.17		< 2.20			
Q19	DL02	09532	25.0	< 0.04		5.95 J			
Q19	DL02	09535	26.0	0.25 U	0.30 U	0.34 J	0.0026 U	0.00072 J	1.6 J
Q19	DL03	09539	19.0	0.25		< 2.88			
Q19	DL03	09545	20.0	< 0.04		2.82 J			
Q19	DL03	09546	21.0	0.19		< 2.58			
Q19	DL03	09547	22.0	0.17		3.57			
Q19	DL03	09553	23.0	0.24		< 2.88			
Q19	DL03	09559	24.0	0.18		< 2.46			
Q19	DL03	09565	25.0	0.17		19.11			
Q19	DL03	09585	26.0	0.16 J	0.40 J	0.36 J	0.0025 U	0.00036 J	2.2 J
Q19	DL04	09566	19.0	0.21		3.69 J			
Q19	DL04	09568	20.0	< 0.03		< 3.12			
Q19	DL04	09569	21.0	0.19		< 2.38			
Q19	DL04	09573	22.0	0.22		< 2.39			

**Cell 12-Table 5
 Focused Soil Boring Sample Results**

Subcell	Boring Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Q19	DL04	09575	23.0	0.14		2.50 J			
Q19	DL04	09576	24.0	0.21		< 2.22			
Q19	DL04	09582	25.0	0.27		< 3.38			
Q19	DL04	09588	26.0	0.19 J	0.27 J	0.18 J	0.0025 U	0.00027 J	2.3 J

**Cell 12-Table 5
Focused Soil Boring Sample Results**

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238
TCE - Trichloroethene

PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

UJ - Validation qualifier used to indicate that the result was qualified as non-detect and the associated reporting limit is considered an estimate.

< - Validation qualifier (for on-Site radiological constituents) used to indicate that the result was qualified as non-detect.

Notes:

See Cell 12-Figure 6 for boring locations.

DL sample is analyzed on Site for radionuclides (TH-232 and U-238) using the gamma spectroscopy system.

DL sample is analyzed for volatile organic compounds (TCE and PCE) using solid phase microextraction and capillary gas chromatography by Stone Environmental Inc.

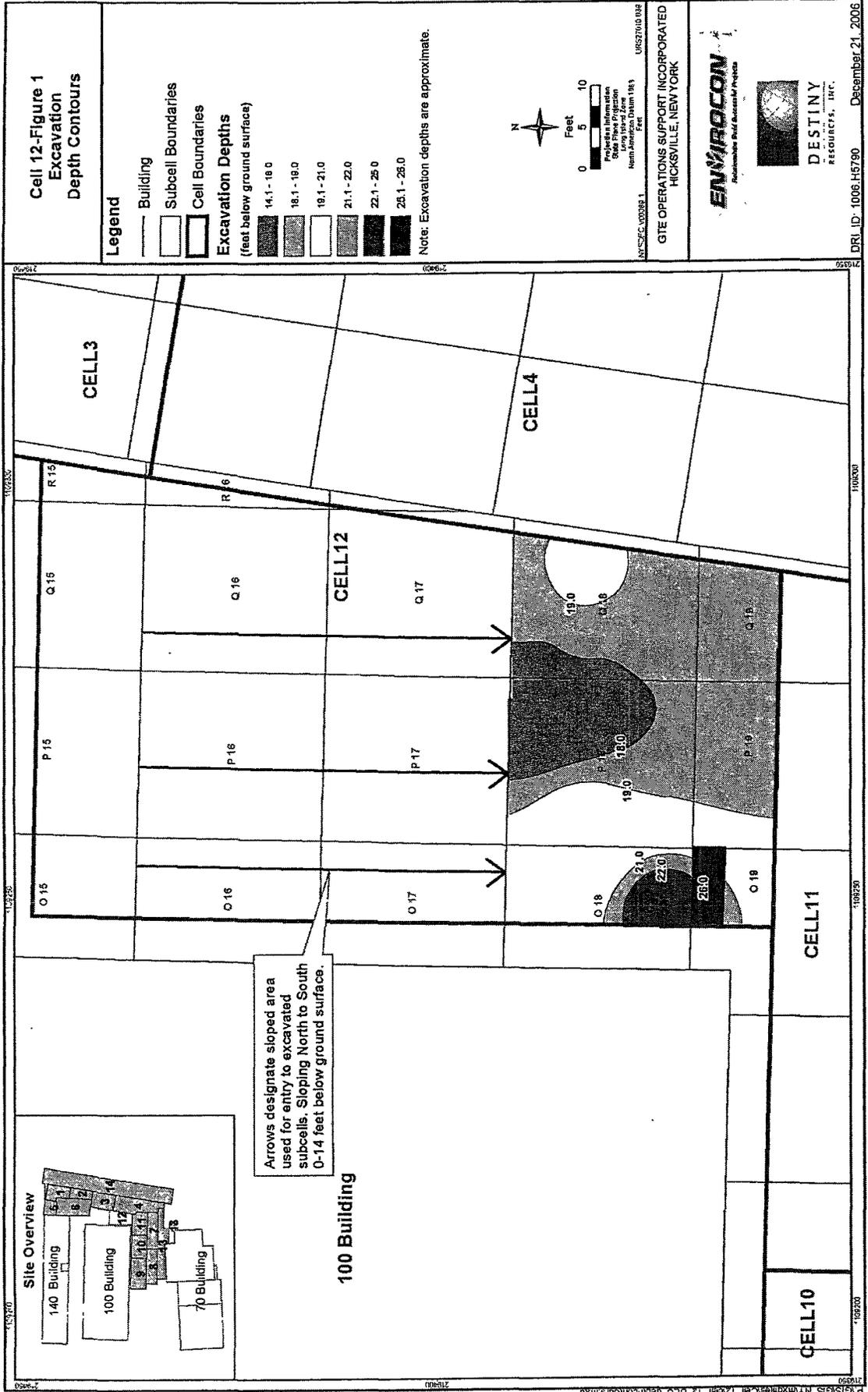
SP sample result is bold and indicates that analysis was performed off Site by Severn Trent Laboratories, Inc.

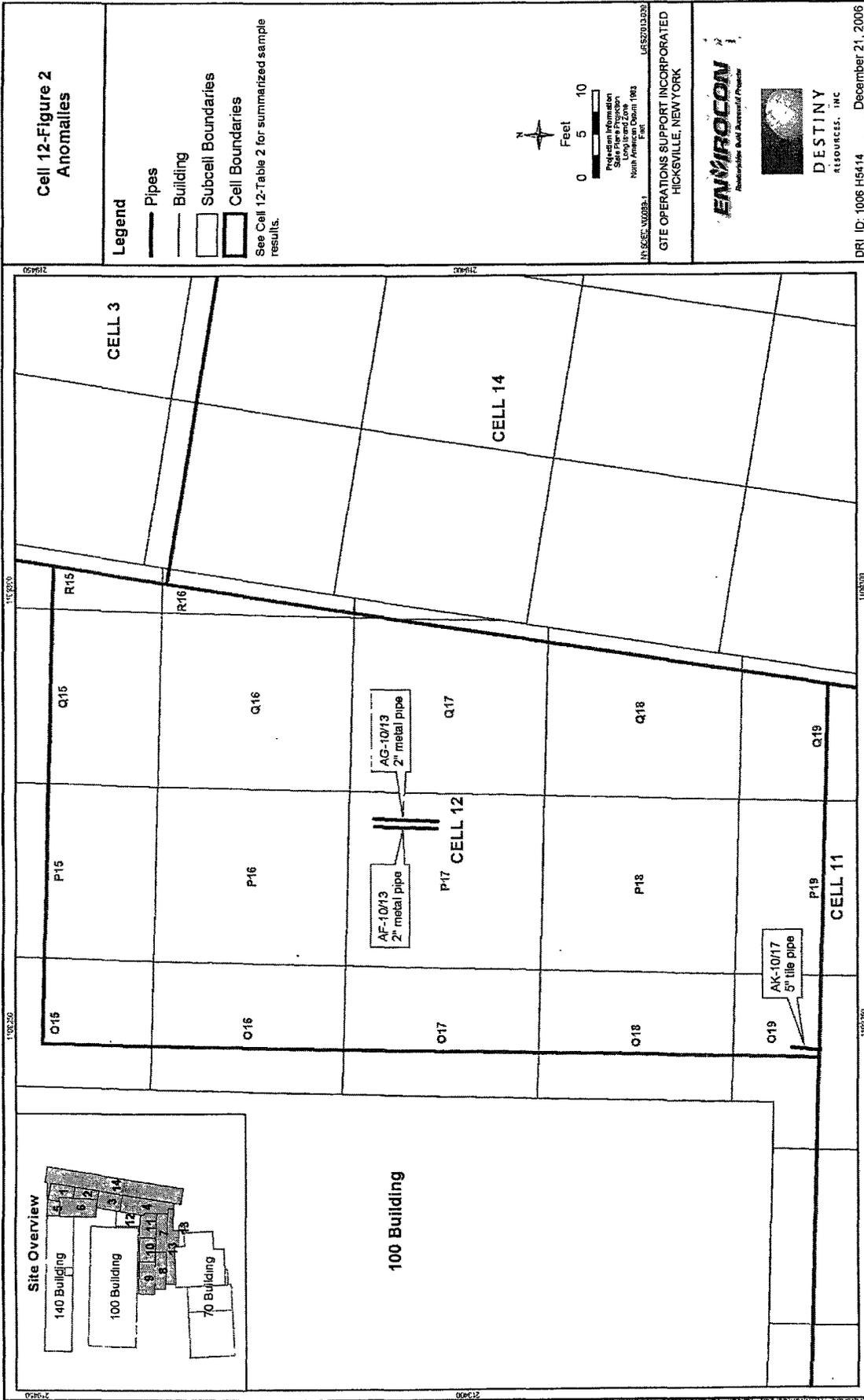
Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.

Blank cell indicates analysis was not performed.

* Barcoded as subcell O19 but actual location is in subcell O18.

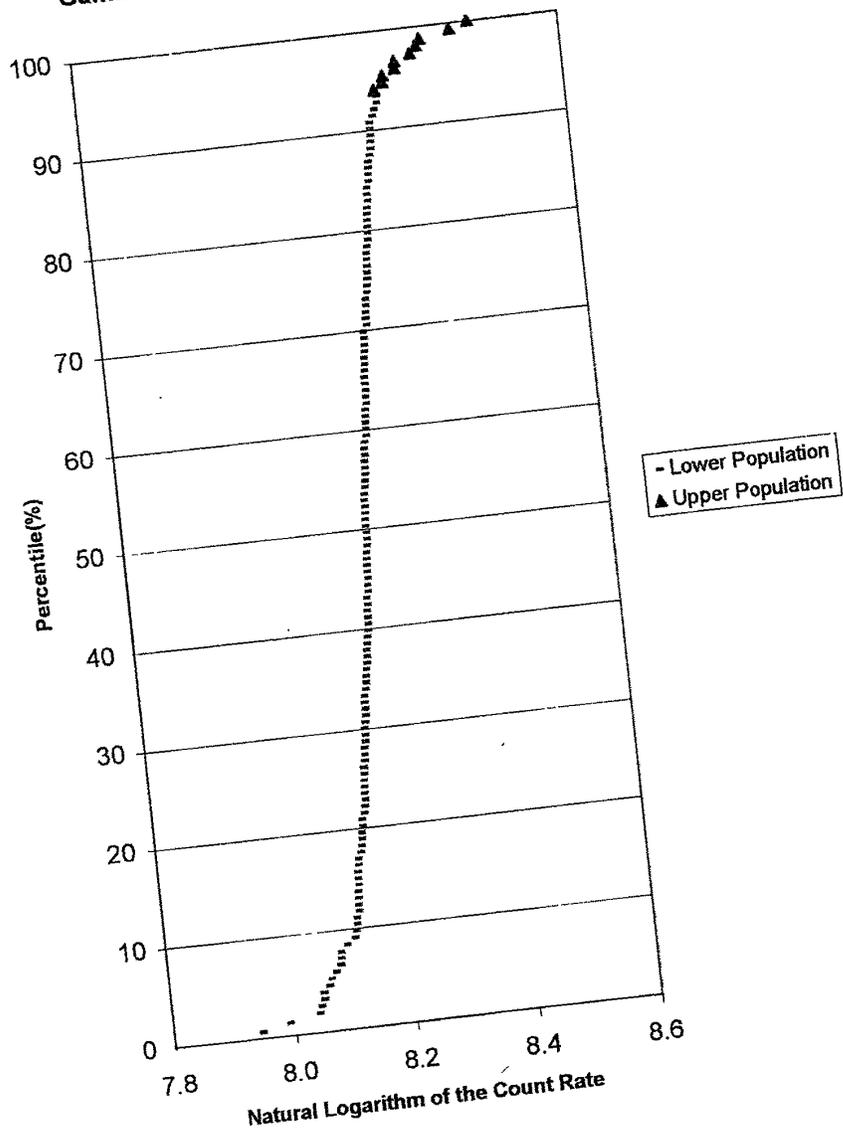
** Barcoded as subcell Q19 but actual location is in subcell P19.







Cell 12-Figure 4
Cumulative Frequency Distribution
Gamma Radiation Walkover Survey Data







"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc:
Subject: Cells 5,10,11 and Cell 12 units O18,19, P18, P19, Q18, Q19

05/12/2004 03:54 PM

We have conducted walkover surveys of Cells 5,10,11,12 (units O,P, and Q 18-19) and reviewed the CF/VF sample data including the DL samples from the subsurface soil boreholes. We agree that these results are below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore we have no objection to backfilling these cells. Upon receipt and review of your data packages for these cells and receipt of the sample results from our contract lab, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 1

GTES0003584

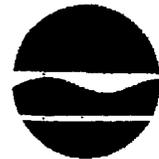
New York State Department of Environmental Conservation

Division of Environmental Remediation, Region One

Building 40 - SUNY, Stony Brook, New York 11790-2356

Phone: (631) 444-0240 • FAX: (631) 444-0248

Website: www.dec.state.ny.us



Erin M. Crotty
Commissioner

January 5, 2004

Jean Agostinelli
GTE Operations Support, Inc.
190 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard, December 20, 2003
Former Sylvania Electric Products Facility, Site # V00089-1

Dear Ms. Agostinelli:

The Department has reviewed the December 20, 2003 report concerning the borrow soils from the Spagnoli Road area. Based on the data in this report, the Department finds these soils to be acceptable for use as backfill at the Former Sylvania Electric Products Facility site in Hicksville.

If you have any questions, please call me at (631) 444-0244.

Sincerely,

Robert R. Stewart
Environmental Engineer I
Environmental Engineer I

cc: W. Parish
J. Riggi

Attachment B
Page 1 of 1

GTES0003585

**Cell 12, Subcells O18, O19, P18, P19, Q18 and Q19
MARSSIM Evaluation Results
Using Severn Trent Laboratory, Inc. Sample Results**

The survey unit, Cell 12, subcells O18, O19, P18, P19, Q18 and Q19, passed the MARSSIM¹ Sign Test and the area is considered releasable. (Since less than 25 percent of subcell O19 is in Cell 12, it is considered part of subcells O18 for this evaluation) The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 12, subcells O18, O19, P18, P19, Q18 and Q19 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 13 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 13 samples are presented in the table on page 3 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 12, subcells O19, P18, P19, Q18 and Q19 (Attachment page 5), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 13 soil sample analyses.

Beginning on page 4 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 5 and 6 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 6) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

radionuclide. The values in this report are based on the actual average concentration and standard deviation of each radionuclide as calculated from the sample results on page 3 of this Attachment.

The third report is on pages 7 through 9 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on page 3. On the first page of this report (Attachment page 7) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 3 of the report (Attachment page 9) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.09. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 12

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
09847	0.2 J	0.54 J	0.45 J
09848	0.19 J	0.54 J	0.27 J
09283	0.22 J	1.05 J	0.99
09408	0.32 J	0.86 J	0.67 J
09409	0.32 J	0.76 J	1.04
09410	0.13 U	0.52 J	0.68 J
09411	0.135 J	0.29 J	0.46 J
09407	0.17 U	0.49 J	0.42 J
09849	0.24 J	0.28 J	0.34 J
09850	0.14 J	0.35 J	0.27 J
09851	0.15 U	0.75 J	0.52 J
09852	0.25 U	0.35 J	0.29 J
09406	0.21 J	0.48 J	0.42 J

Notes:

Cell area = 136 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
 Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
 Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

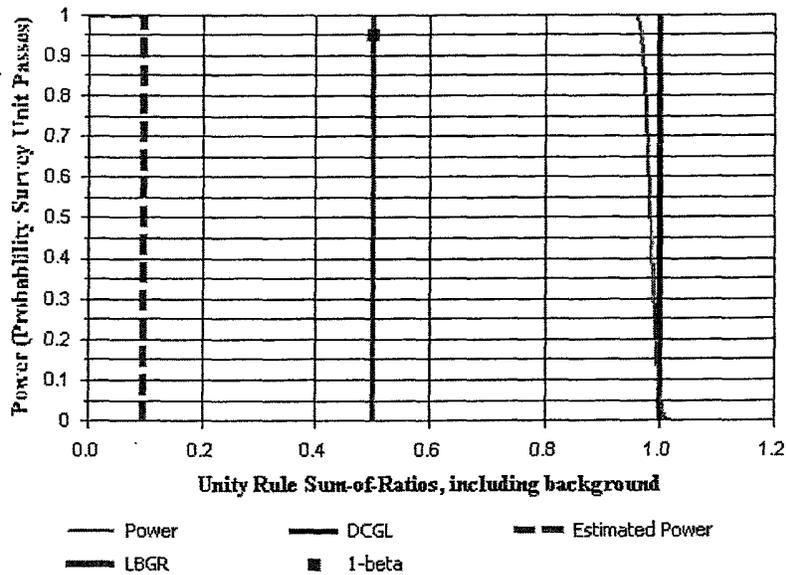


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 12 Rows 18 and 19 with STL Data		
Comments:	Subcells O18, O19, P18, P19, Q18 and Q19		
Area (m ²):	136	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.03
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.1
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.2 \pm 0.07	N/A
U-234	0.6 \pm 0.3	N/A
U-238	0.6 \pm 0.3	N/A

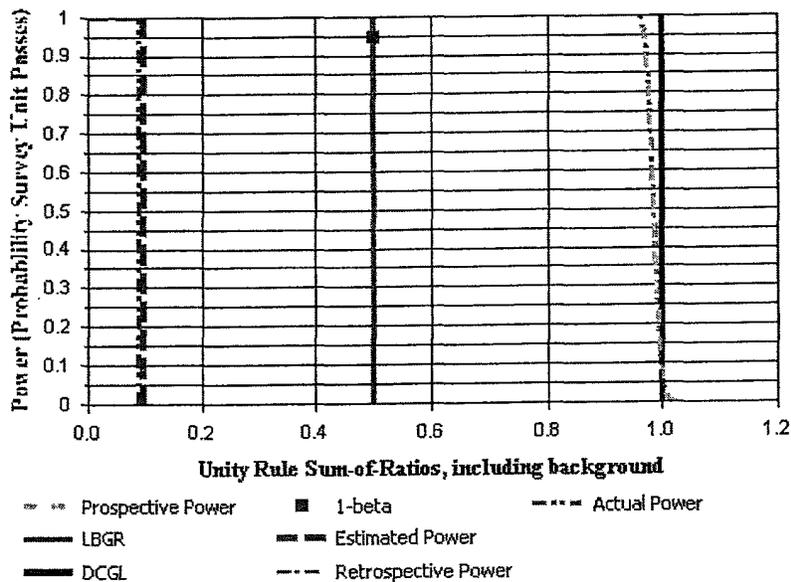


DQA Surface Soil Report

Assessment Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 12 Rows 18 and 19 with STL Data		
Report Number:	1		
Survey Unit Samples:	13		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	Reject Null Hypothesis (Survey Unit PASSES)		

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
09847	S	0.2	0.54	0.45
09848	S	0.19	0.54	0.27
09283	S	0.22	1.05	0.99
09408	S	0.32	0.86	0.67
09409	S	0.32	0.76	1.04
09410	S	0.13	0.52	0.68
09411	S	0.14	0.29	0.46
09407	S	0.17	0.49	0.42
09849	S	0.24	0.28	0.34
09850	S	0.14	0.35	0.27
09851	S	0.15	0.75	0.52
09852	S	0.25	0.35	0.29
09406	S	0.21	0.48	0.42

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
09847	S	0.09
09848	S	0.08
09283	S	0.12
09408	S	0.14
09409	S	0.15
09410	S	0.07
09411	S	0.06
09407	S	0.08
09849	S	0.1
09850	S	0.06
09851	S	0.08
09852	S	0.1
09406	S	0.09



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	13	N/A	N=13
Mean (SOR)	0.09	N/A	0.1
Median (SOR)	0.09	N/A	N/A
Std Dev (SOR)	0.03	N/A	0.03
High Value (SOR)	0.15	N/A	N/A
Low Value (SOR)	0.06	N/A	N/A

Cell 13 Status Report

INTRODUCTION

Cell 13 is comprised of subcells E24 to R24, L25 to N25, O26, and the northern portions of subcells E25 to K25. The cell is located on the north side of the 70 Property (Cell 13-Figure 1 and Figure 6 in Volume I). Excavation of Cell 13 began on July 7, 2003 and was completed on July 16, 2003. Verbal approval to backfill Cell 13 was received from NYSDEC representatives on July 16, 2003 and documented in an e-mail on July 17, 2003 (Cell 13-Attachment A). A formal request to backfill Cell 13 was submitted in a report to NYSDEC titled *Cell 13 Request to Backfill* dated July 16, 2003. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

Cell 13 was backfilled beginning July 17, 2003 and was completed on July 18, 2003. The soils used for backfill came from the J. D Posillico Bros., Inc. Yard (JDP Yard) in Farmingdale, NY (Stockpile 1). Prior to use as backfill, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed on soil samples collected at the backfill source. The survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling* dated August 7, 2003. Approval to use these soils was granted from NYSDEC in an e-mail dated August 13, 2003 (Cell 13-Attachment B).

Additional excavation of Cell 13, subcells E24 and F24, was conducted during the Cell 8 excavation. While performing the Cell 8 excavation, contamination indicators in the southwest portion of Cell 8 resulted in the excavation of the northern portion of subcells E24 and F24. The excavation of Cell 8, which included the excavation of portions of subcells E24 and F24 to 6 ft bgs, began on July 22, 2003 and was completed on September 11, 2003. Information concerning the backfilling of subcells E24 and F24 is given in the Cell 8 Status Report.

EXCAVATION DETAILS

Cell 13 originally included subcells H24 to N24 and O26. Cell 13 was expanded during the excavation to include the additional adjacent subcells where contaminants above the Site cleanup levels were identified. The final configuration of Cell 13 included subcells E24 to R24, L25 to N25, O26, and the northern portions of subcells E25 to K25 (Cell 13-Figure 1).

DEPTHS OF EXCAVATION

Cell 13 was excavated to depths ranging from the ground surface to 8 ft bgs. The excavation depths for each subcell are presented in Cell 13-Table 1 and are shown on Cell 13-Figure 1. (See Section 6.2.4 of Volume I for a description of how the excavation depths are determined.) A total of 5,190,386 pounds of soil and debris (255 Lift LinersTM) were removed from Cell 13 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 13, one anomaly, a plastic pipe, was encountered. Information about the anomaly is provided in Cell 13-Table 2. The approximate location where the anomaly was encountered during excavation activities is shown on Cell 13-Figure 2. The anomaly encountered during the excavation activities in Cell 13 was sized to fit and placed in a Lift Liner™ and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 13, a gamma radiation walkover survey was performed in accessible areas. The walkover covered most areas of the cell floor; however, as can be seen on Cell 13-Figure 3, 100% coverage could not be attained.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 13-Figure 4 depicts a CFD plot of the 1986 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 13-Figures 5a and 5b) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluation are provided in Appendix C. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the exceptions given below.

- G24 – The A, C, and D samples were not collected due to the sloping surface where these samples would have been collected. The B sample was collected in a relatively small area of the subcell that had a flat bottom. Characterization samples were collected on the walls. (Characterization samples are analyzed on Site but are not sent to STL.)
- E25 to K25 – The southern portion of each of these subcells was not included in Cell 13. Therefore, the C samples from E25 to H25 were not collected and the B, C, and D samples from I25 to K25 were not collected (Cell 13-Figure 5a).

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

- P24 to R24 and N25 – A portion of each of these subcells was not excavated. Samples were not collected from the unexcavated portion of these subcells (Cell 13-Figure 5b).

In addition to the floor samples described above, an additional 17 VF samples were collected from the walls or at the joint of a wall and floor created within the cell due to the excavation to different depths within the cell (Cell 13-Figures 6a and 6b).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R MOD and by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 13-Table 3 and are shown on Cell 13-Figures 5a and 5b. Cell 13-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF samples. The radiological, PCE, TCE, and nickel results for STL analyses of the VF wall samples are provided in Cell 13-Table 5 and are shown on Cell 13-Figures 6a and 6b.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. The survey unit, Cell 13, passed this evaluation (Cell 13-Attachment C). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

All results referred to above include results obtained during the original Cell 13 excavation and the excavation of subcells E24 and F24 performed during the Cell 8 excavation.

CONCLUSION

Based on verification sample STL analytical results, the radiological and chemical Site cleanup levels were attained for Cell 13.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

Tables

Cell 13-Table 1	Cell 13 Subcell Excavation Depths
Cell 13-Table 2:	Cell 13 Anomaly Sample Results
Cell 13-Table 3:	Cell 13 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 13-Table 4:	Cell 13 Maximum Verification Floor and Wall Sample Results Severn Trent Laboratories, Inc.
Cell 13-Table 5:	Cell 13 Summary of Verification Wall Sample Results Severn Trent Laboratories, Inc.

Figures

Cell 13-Figure 1:	Cell 13 Excavation Depth Contours
Cell 13-Figure 2:	Cell 13 Anomaly
Cell 13-Figure 3:	Cell 13 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 13-Figure 4:	Cumulative Frequency Distribution for Cell 13 Gamma Radiation Walkover Data
Cell 13-Figure 5a:	Cell 13 (Subcells E24 to K24, and E25 to K25) Verification Floor Sample Locations and Results
Cell 13-Figure 5b:	Cell 13 (Subcells L24 to R24, L25 to N25, and O26) Verification Floor Sample Locations and Results
Cell 13-Figure 6a:	Cell 13 (Subcells E24 to K24, and E25 to K25) Verification Wall Sample Locations and Results
Cell 13-Figure 6b:	Cell 13 (Subcells L24 to R24, L25 to N25, and O26) Verification Wall Sample Locations and Results

Attachments

Cell 13-Attachment A:	E-Mail from NYSDEC to GTEOSI dated July 17, 2003
Cell 13-Attachment B:	E-Mail from NYSDEC to GTEOSI dated August 13, 2003
Cell 13-Attachment C:	Cell 13 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

**Cell 13 -Table 1
Subcell Excavation Depths**

Cell 8						Cell 7						Cell 4		
E24	F24	G24	H24	I24	J24	K24	L24	M24	N24	O24	P24	Q24	R24	
2-6 feet	2-6 feet	2-6 feet	4-8 feet	5-8 feet	5-8 feet	6-8 feet	4-7 feet	2-6 feet	2-6 feet	0-7 feet	0-6 feet	0-4 feet	0-4 feet	
E25	F25	G25	H25	I25	J25	K25	L25	M25	N25					
2-5 feet	2-5 feet	2-5 feet	2-6 feet	4-6 feet	5-6 feet	6-7 feet	0-6 feet	0-4 feet	0-5 feet					
										O26				
										0-4 feet				

Notes:
 Excavation depths are approximate.
 — Subcell Boundary
 — Cell Boundary

Cell 13-Table 3
 Summary of Verification Floor Sample Results
 Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tr-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E24	A	04953	5.9	0.38 J	0.39 J	0.39 J			
E24	B	04954	3.6	0.45	8.06	7.13			
E24	C	04957	4.9	0.56	1.90	1.94			
E24	D	04956	3.2	0.38 J	0.51	0.37 J	0.0025 U	0.00046 J	2.5 J
E25	A	01793	3.9	0.24 J	0.94	0.92			
E25	B	01794	4.2	0.33 J	5.43 J	4.23 J			
E25	D	01795	3.9	0.16 J	0.74	0.76	0.0026 U	0.0026 U	1.8 J
F24	A	04925	6.0	0.47	0.63	0.72	0.0026 U	0.00081 J	3.5 J
F24	B	01829	3.7	0.21 J	7.38	5.08	0.0026 U	0.094	11.3
F24	C	01832	2.5	0.43	4.69	4.06			
F24	D	04926	2.9	0.82	6.09	5.10			
F25	A	01790	4.3	0.28 J	3.28	2.52	0.0026 U	0.0026 U	3.5 J
F25	B	01791	3.9	0.23 U	3.67	2.98			
F25	D	01792	4.8	0.28 J	5.91	5.80			
G24	B	01235	4.2	0.23 J	1.70 J	1.77 J	0.0027 U	0.0027 U	4.7
G25	A	01723	3.9	0.59	7.9	7.5			
G25	B	01725	4.0	0.62	9.6	10.6	0.0026 U	0.0026 U	10.0
G25	D	01727	3.9	0.31 J	4.49	5.18			
H24	A	01236	7.6	1.30	2.05	3.21			
H24	B	01237	7.0	1.12	1.11	1.07	0.0031 U	0.0031 U	16.1
H24	C	01238	7.3	1.35	0.83	0.84			
H24	D	01239	7.3	0.51	1.33	1.30			
H25	A	01722	5.3	0.52	9.1	5.39			
H25	B	01724	4.8	0.49	2.81	1.82	0.0025 U	0.0025 U	2.5 J
H25	D	01726	3.9	0.54	5.64	3.59			
I24	A	01291	6.8	0.93	1.50	1.40			
I24	B	01292	7.1	1.34	2.16	2.31			
I24	C	01293	7.5	0.75	6.0	3.5			
I24	D	01234	6.7	1.40	3.16	0.84	0.0028 U	0.0028 U	9.9
I25	A	01632	5.1	0.36 J	11.1	4.17	0.0027 U	0.0019 J	5.3
J24	A	01368	7.2	0.36 J	1.41	0.87			
J24	B	01369	6.1	0.21 J	0.66	0.48			
J24	C	01370	6.0	0.62	2.36	1.11			
J24	D	01371	5.9	0.35 J	3.70	1.77	0.0026 U	0.0026 U	7.7 J
J25	A	01378	6.3	0.40 J	71.6	7.2	0.0026 U	0.0026	6.5 J
K24	A	01372	7.1	0.48	11.5	5.02			
K24	B	01373	6.2	0.29 J	1.44	0.88			
K24	C	01374	6.2	0.15 J	1.35	0.94			
K24	D	01375	6.2	0.41	0.48	0.41	0.0026 U	0.0026 U	3.3 J
K25	A	01376	6.3	0.34 J	5.48	3.32	0.0029 U	0.00035 J	3.8 J
L24	A	01514	6.5	0.23 J	1.18 J	1.14 J			
L24	B	01515	6.5	0.37 J	1.08	0.66	0.0027 U	0.0027 U	7.8
L24	C	01516	6.5	0.36	5.9	4.46			
L24	D	01517	6.5	0.88	0.56	0.55			

Cell 13-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
L25	A	01415	5.3	0.54	2.26	2.10	0.0028 U	0.0028 U	6.9 J
L25	B	01416	4.2	0.35 J	0.92	0.60			
L25	C	01417	4.1	0.23 J	2.36	1.92			
L25	D	01418	5.0	0.60	3.34	3.08			
M24	A	01524	3.1	0.61	0.93	0.89			
M24	B	01525	3.1	0.69	1.12	1.02			
M24	C	01523	3.1	0.76 J	1.45	0.96			
M24	D	01522	3.0	0.37 J	2.59	2.44	0.0025 U	0.0025 U	4.2
M25	A	01532	3.0	0.47	6.6	5.09			
M25	B	01531	3.0	0.77	2.64	2.41			
M25	C	01530	3.0	0.51	3.90	4.97			
M25	D	01529	3.0	0.49	0.63	0.46	0.0026 U	0.0026 U	2.7 J
N24	A	01519	4.8	0.49	1.92	1.65			
N24	B	01518	4.8	0.18	1.00	1.05	0.0025 U	0.0025 U	4.3
N24	C	01520	4.7	0.35 J	1.14	0.94			
N24	D	01521	4.7	0.59	0.56	0.53			
N25	A	01533	4.6	0.60	0.92	0.59	0.0027 U	0.0027 U	3.1 J
O24	A	01712	6.8	0.22 U	2.35	2.36			
O24	B	01710	6.0	0.17 J	2.26 J	2.37 J	0.0025 U	0.0025 U	5.0
O24	C	01527	4.9	0.31 J	0.94	0.92			
O24	D	01528	5.0	0.31 J	1.32	1.06 U			
O24	E	01513	4.8	0.20 J	0.42	0.64	0.0025 U	0.0025 U	1.9 J
O26	A	01178	2.3	0.36 J	3.7	3.08			
O26	B	01179	2.8	0.53	0.93	1.06			
O26	C	01180	4.0	0.74	1.31	1.31			
O26	D	01181	2.1	0.71	2.60	2.63			
O26	C	01177	3.9				0.0026 U	0.00046 J	5.8
P24	A	01853	2.9	0.67	3.24	2.82	0.0027 U	0.0011 J	28.8
P24	D	01747	5.7	0.36 J	1.62	1.84			
Q24	A	01851	3.2	0.41	13.3	12.7	0.0027 U	0.0015 J	38.9
R24	A	01852	3.4	0.95	8.4	9.1	0.0026 U	0.0026 U	10.7

Cell 13-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232
U-234 - Uranium-234
U-238 - Uranium-238

TCE - Trichloroethene
PCE - Tetrachloroethene
Ni - Nickel

Units:

pCi/g - picoCurie/gram
mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.
J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 13-Figures 5a and 5b for sample information.
Blank cell indicates analysis was not performed.

Cell 13-Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.

Analyte	VF Type	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	Floor	1.4	6.7	I24
	Wall	0.84	4.0	H24
Maximum U-234 (pCi/g)	Floor	71.6	6.3	J25
	Wall	9.1	3.6	F24
Maximum U-238 (pCi/g)	Floor	12.7	3.2	Q24
	Wall	7.8	3.6	F24
Maximum TCE (mg/kg)	Floor	0.0031 U	7.0	H24
	Wall	0.013 J	3.6	F24
Maximum PCE (mg/kg)	Floor	0.094	3.7	F24
	Wall	0.0058	5.9	E24
Maximum Ni (mg/kg)	Floor	38.9	3.2	Q24
	Wall	393	3.2	F24

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Cell 13-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

SubCell	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
E24	04939	4.0	0.44	0.38 J	0.23 J	0.0026 U	0.0026 U	4.4
E24	04940	2.5	0.32 J	0.42	0.42	0.0026 U	0.0026 U	1.8 J
E24	04941	4.6	0.35 J	0.43	0.36 J	0.0025 U	0.0025 U	2.3 J
E24	04942	5.9	0.58	0.87	0.79	0.0026 U	0.0058	1.6 J
E24	04943	3.7	0.23 J	1.90	2.08	0.0026 U	0.0012 J	2.5 J
F24	04930	5.6	0.41	1.37	1.26	0.0016 J	0.0025 U	11.7
F24	04931	3.9	0.24 J	6.67	6.73	0.0026 U	0.0026 U	18.9
F24	04932	4.7	0.78	0.59	0.47	0.0026 U	0.0026 U	2.5 J
F24	04933	5.7	0.40	5.69	5.01	0.0026 U	0.0026 U	4.0 J
F24	04934	3.6	0.64	9.1	7.8	0.013 J	0.0021 J	18.6
F24	04935	5.0	0.29 J	0.44	0.37 J	0.0025 U	0.0025 U	2.5 J
F24	04937	3.2	0.24 J	0.46	0.39 J	0.0025 U	0.0025 U	393
H24	01629	4.0	0.84	5.02	1.91	0.0032 U	0.0032 U	4.9 J
I24	01631	4.0	0.36 J	6.8	5.41	0.0026 U	0.0026 U	13.4
J24	01630	6.6	0.37 J	3.11	1.20	0.0025 U	0.0025 U	7.3
R24	05400	3.2	0.242 J	0.76 J	0.50 J	0.00072 J	0.0025 U	6.9 J
R24	05401	0.2	0.72	0.67 J	0.45 J	0.0015 J	0.00077 J	51.6 J

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

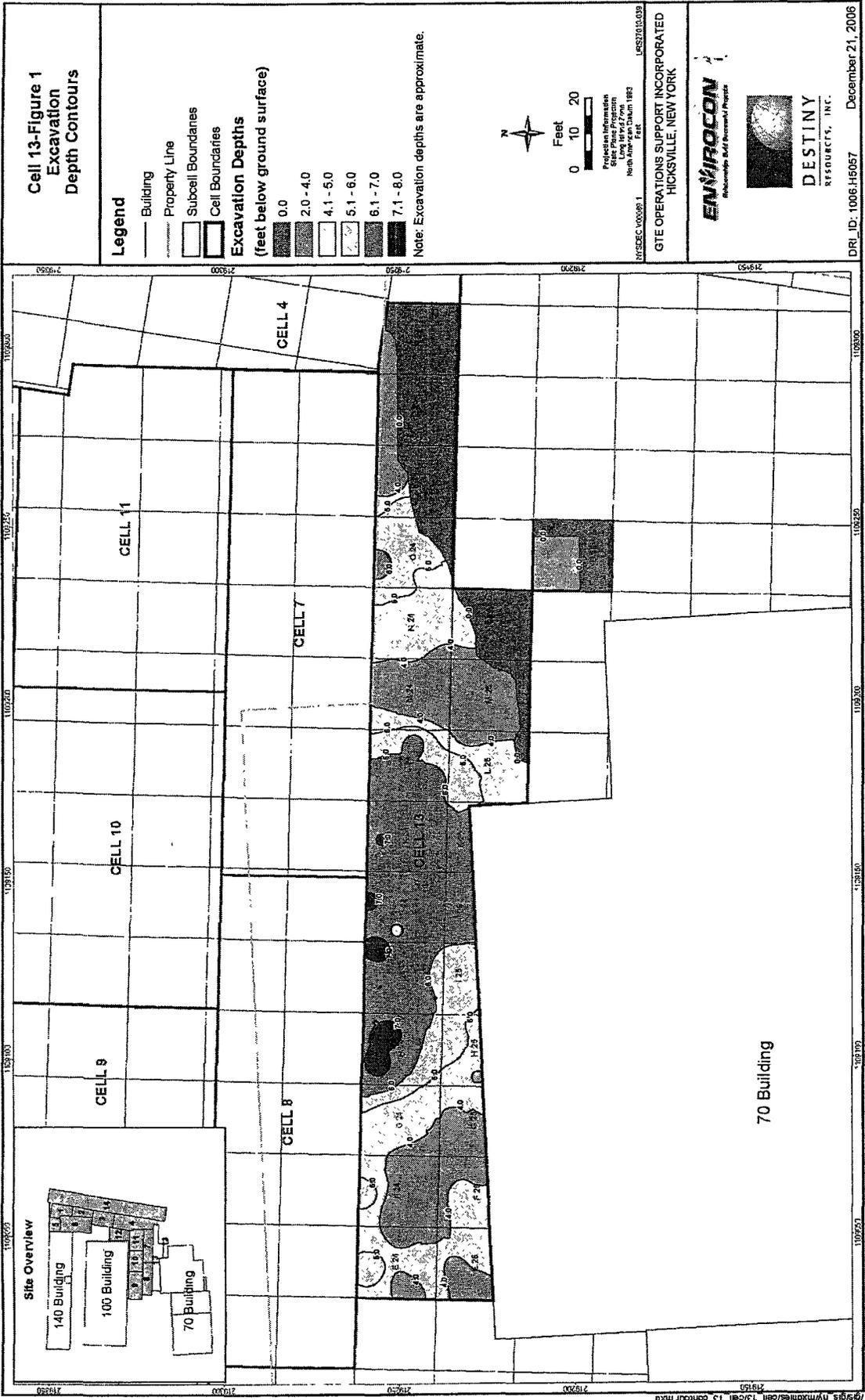
Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 13-Figures 6a and 6b for sample ids and associated locations.



**Cell 13-Figure 2
Anomaly**

Legend

- Pipe
- Building
- - - Property Line
- Subcell Boundaries
- ▭ Cell Boundaries

See Cell 13-Table 2 for summarized sample results.



Feet
0 10 20



Projection Information
Site Pipe Projection
North American Datum 1983
Feet

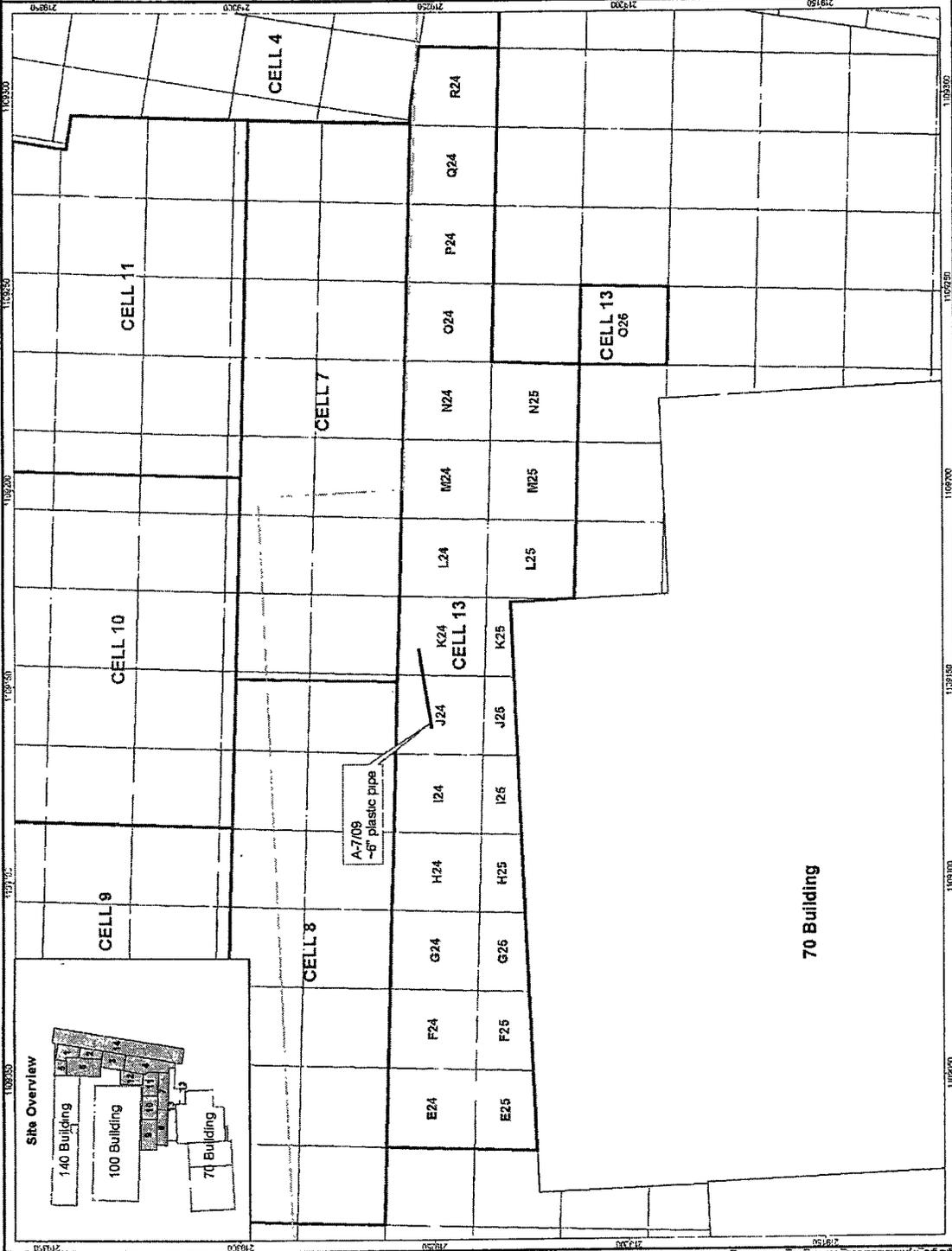
URS210.0235

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK

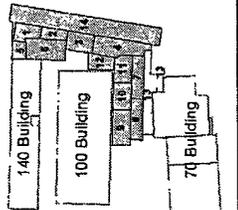


**DESTINY
RESOURCES, INC.**

DRI ID: 1006 H5415 December 21, 2006

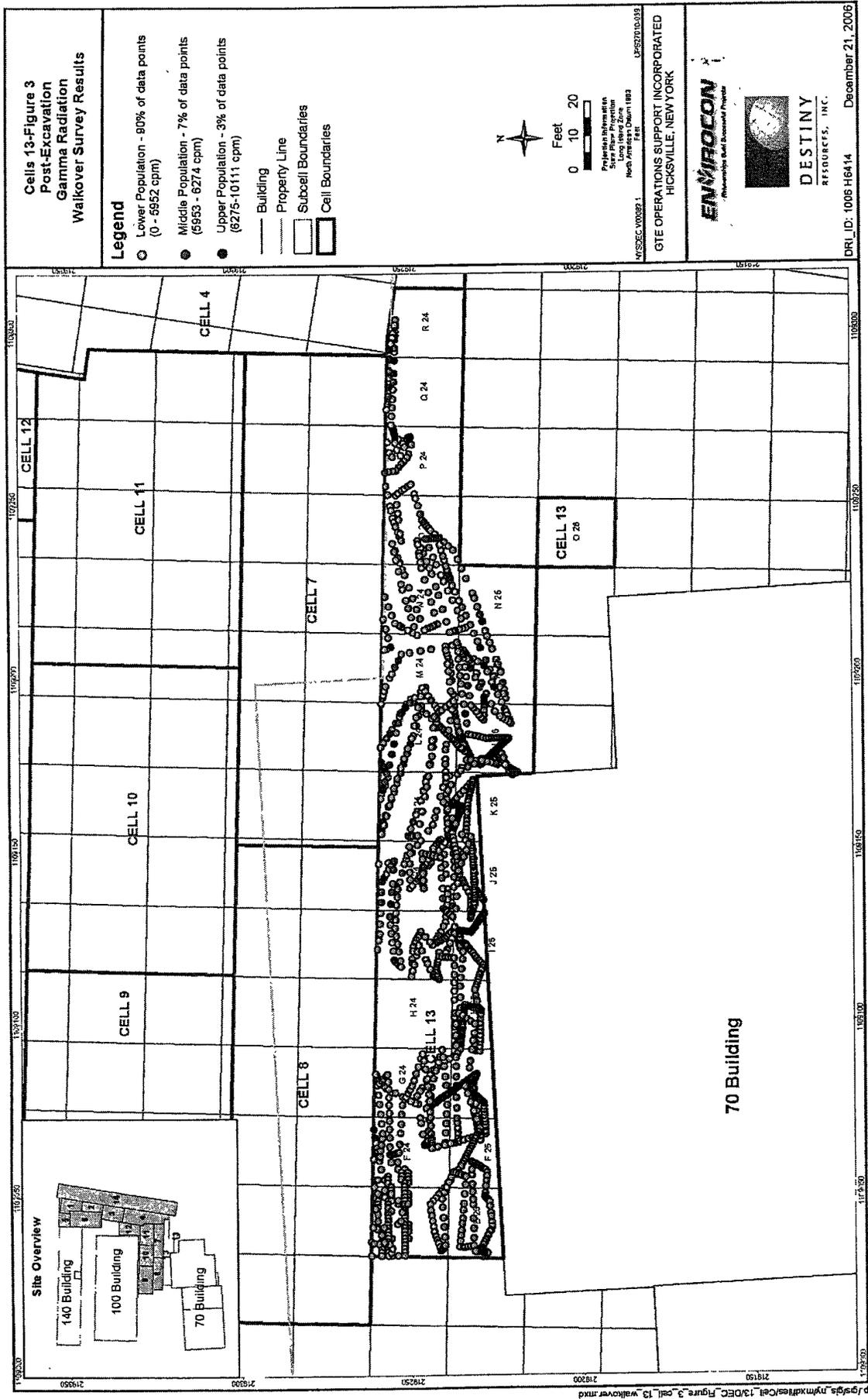


Site Overview



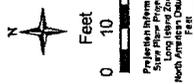
70 Building

g:\pfs\my\mxd\files\cell_13\cell_13_anomalies_final.mxd



**Cells 13-Figure 3
Post-Excavation
Gamma Radiation
Walkover Survey Results**

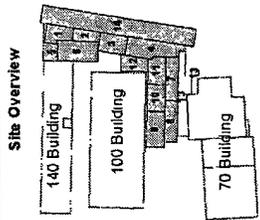
- Legend**
- Lower Population - 80% of data points (0 - 5952 cpm)
 - Middle Population - 7% of data points (5953 - 6274 cpm)
 - Upper Population - 3% of data points (6275-10111 cpm)
 - Building
 - Property Line
 - Subcell Boundaries
 - Cell Boundaries



NYSDJEC.V00002.F.1
 UFS9210.0433
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

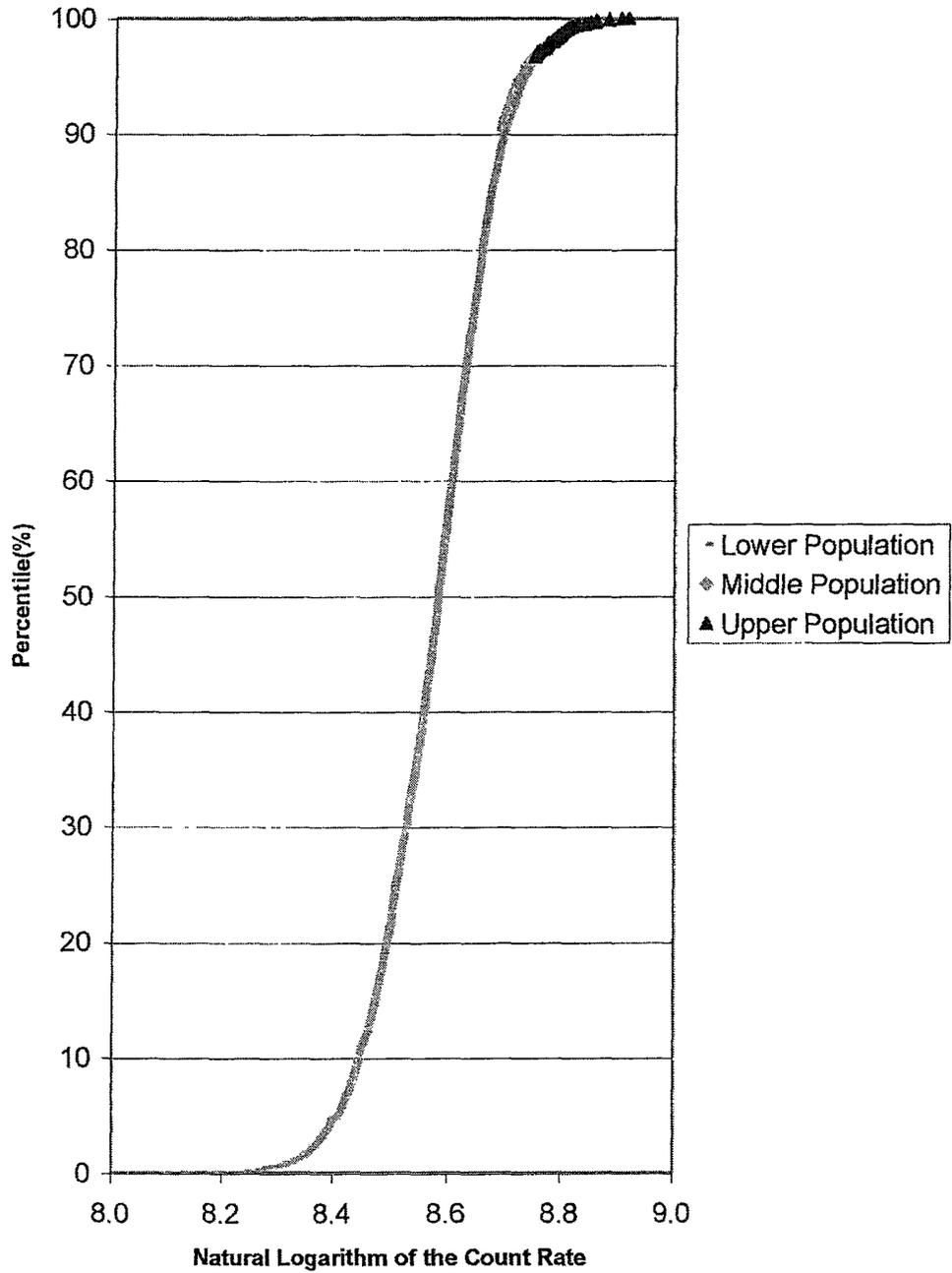
ENVIROCON
 Environmental Solutions
 Environmental Protection

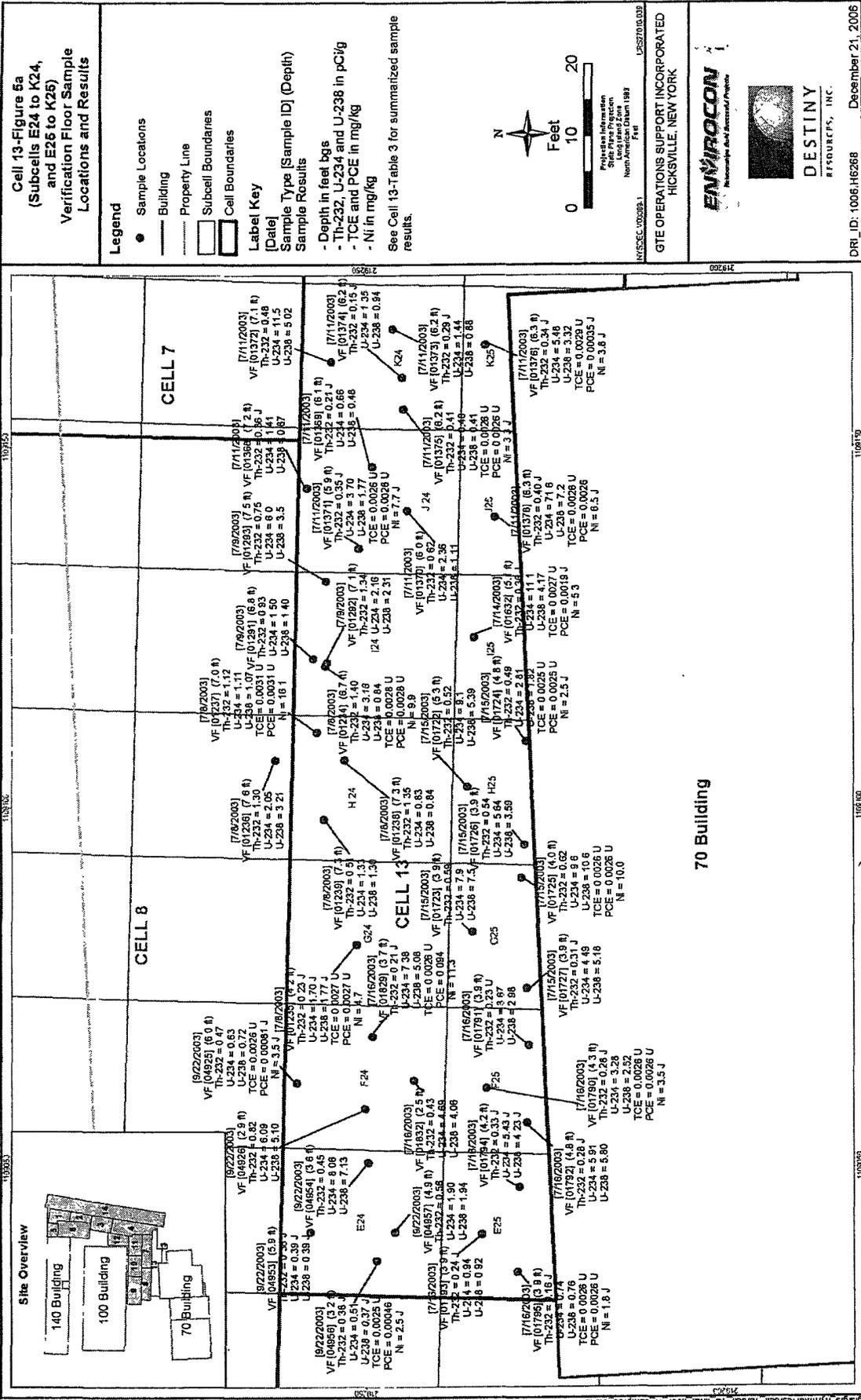
DESTINY RESOURCES, INC.
 December 21, 2006
 DRI_ID: 1006 H6414

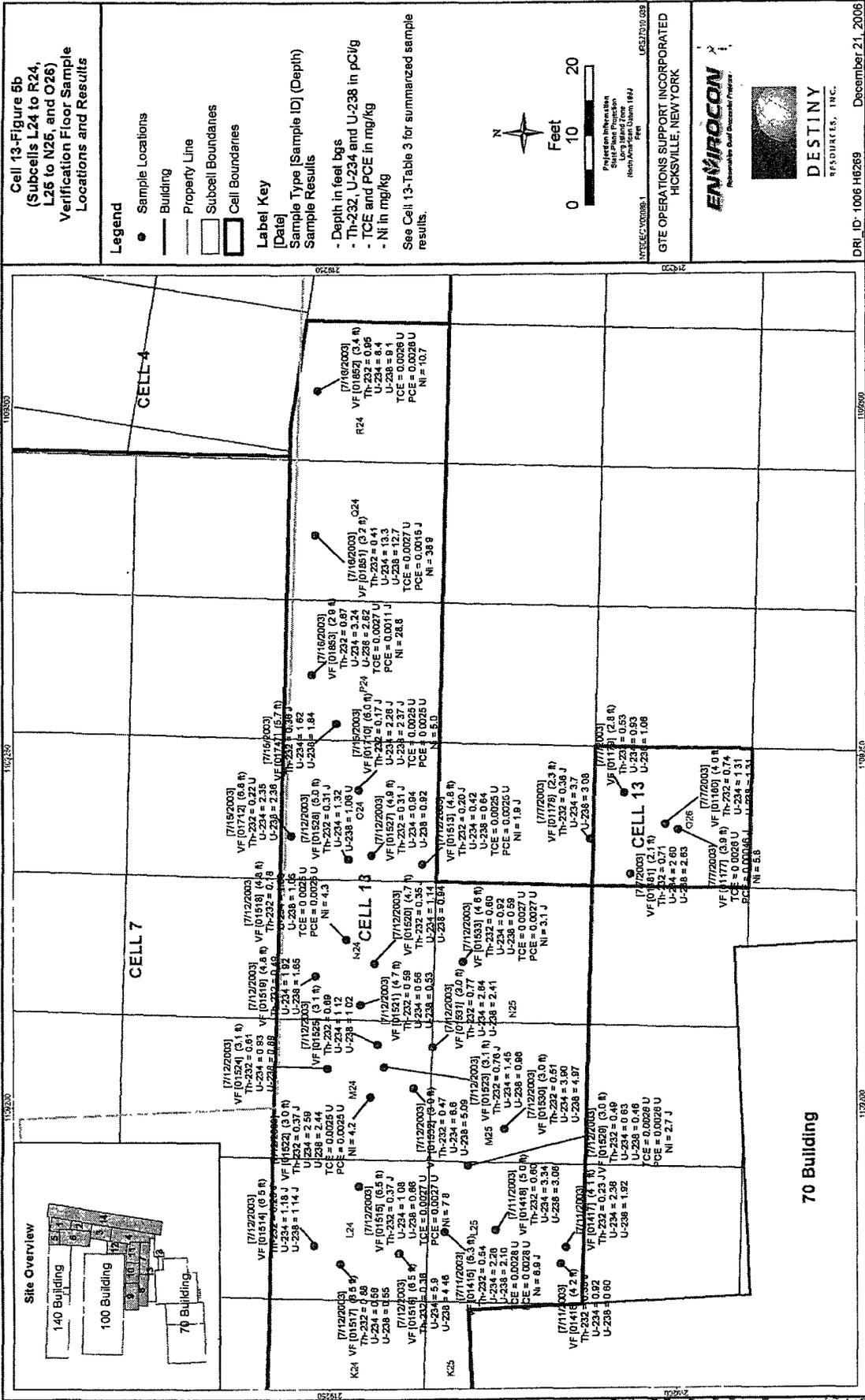


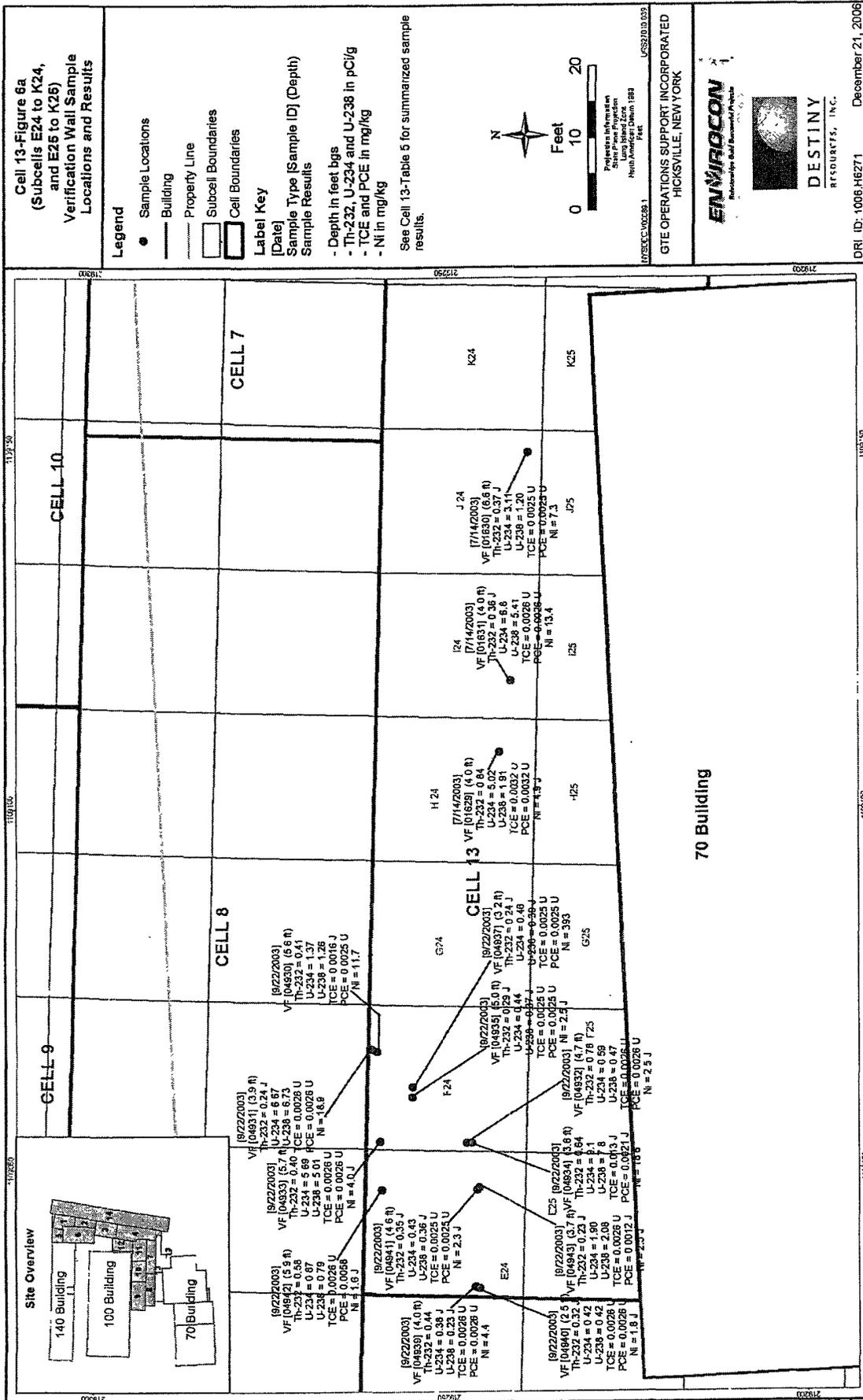
70 Building

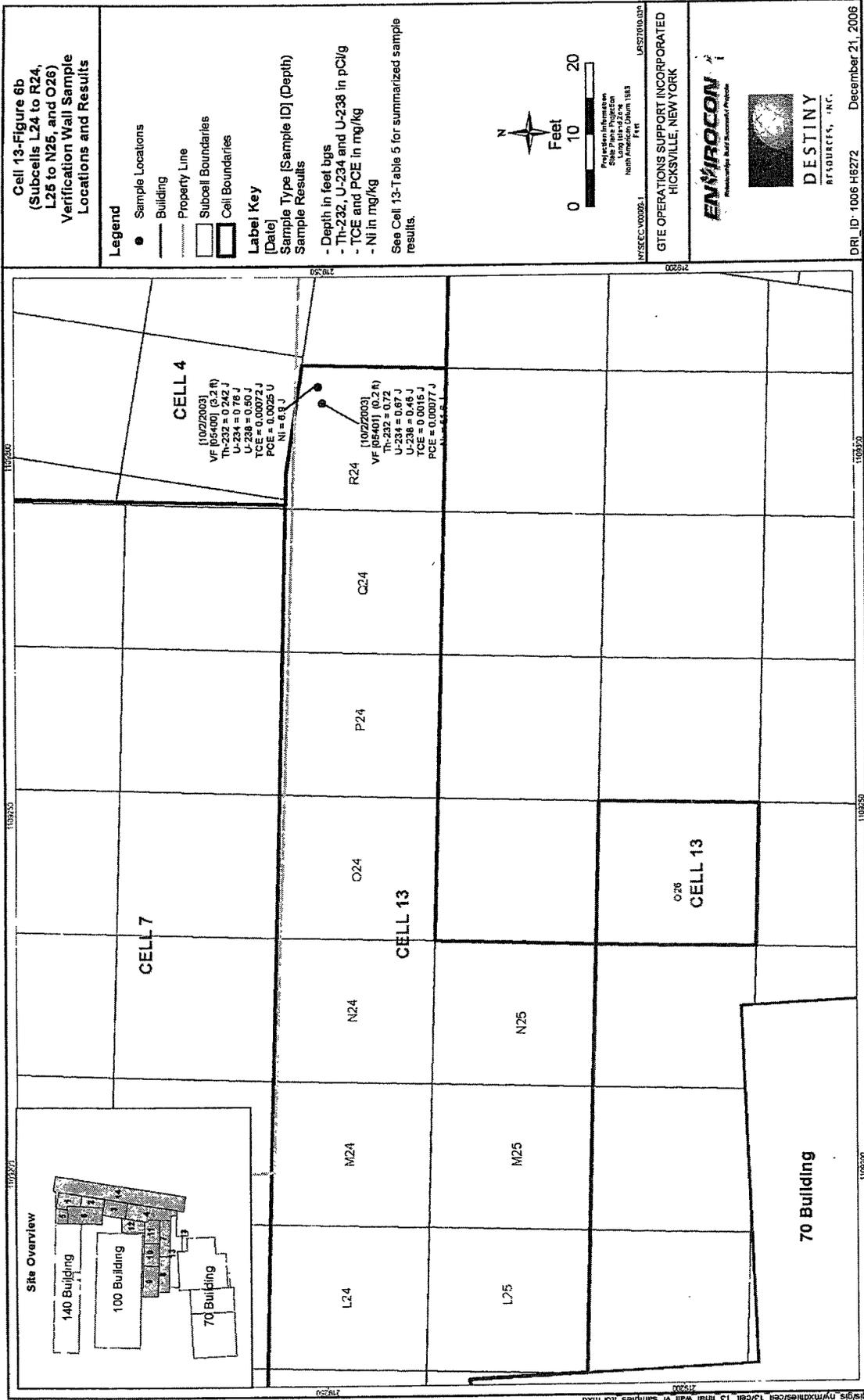
Figure 4
Cumulative Frequency Distribution for
Cell 13 Gamma Radiation Walkover Data











Subj: **Re: Radiological Data Table**
Date: 7/17/2003 8:07:59 AM Eastern Daylight Time
From: bayoungb@gw.dec.state.ny.us
To: ProRadCon@aol.com, jean.agostinelli@verizon.com
CC: jmrigger@gw.dec.state.ny.us, rstewar@gw.dec.state.ny.us, Pam_Cox@URSCorp.com
Sent from the Internet (Details)

I understand you planned to begin backfilling the excavation this morning. I agree that these results are well below the cleanup criteria for uranium and thorium. Once we have reviewed your letter and complete data set, we'll send a formal response.

>>> <ProRadCon@aol.com> 07/16/03 06:44PM >>>
To all:

The attached table contains on-site gamma-spec summary data for samples collected from 70 Property Cell 13 (includes some Cell 7 & 8 samples as well) on Tuesday 7/15 and Wednesday 7/16 that had been analyzed by 1700 Wednesday. There are approximately 10 more CFs and 12 more CHs to be analyzed. This table contains data that was not on the maps generated that displayed data up through Monday 7/14.

In summary, the average U-238 was 8.5 pCi/g, the max was 27 pCi/g; the Th-232 average was 0.5 pCi/g, the max was 1.7 pCi/g.

Please contact me if you have any questions; Site or my mobile number should work.

Kindest regards,

Shane Brightwell, MS, CHP
President
Professional Radiation Consulting, Inc.
4192 Lookout Drive
Loveland, CO 80537-3596
Office: (970) 203-0195
Fax: (720) 294-1153
Mobile: (970) 481-5302
E-mail: proradcon@aol.com

Thursday, July 17, 2003 America Online: ProRadCon

Attachment A
Page 1 of 1

GTES0003614

To: Pam_Cox@urscorp.com, carol_scholl@urscorp.com, ltabor@envirocon.com,
| tspatafora@bluewaterenv.com, proradcon@aol.com, bcohen@certilmanbalin.com
|
| cc:
| Subject: Borrow Soils Characterization Surveys and Sampling, Sylvania
|
|-----|

----- Forwarded by Jean M. Agostinelli/EMPL/TX/Verizon on 08/13/2003 01:49 PM -----

"Robert Stewart"

<rrstewar@gw.dec.s To: Jean M.
Agostinelli/EMPL/TX/Verizon@VZNotes
tate.ny.us> cc:

Subject: Borrow Soils Characterization Surveys and Sampling,
Sylvania
08/13/2003 01:28
PM

Jean,

I have read the Borrow Soils Characterizations Surveys and Sampling dated August 7, 2003.
Based on this report, the soils that were evaluated are suitable for use as backfill.

Bob Stewart
NYSDEC - Region 1

Attachment B
Page 1 of 1

GTES0003615

Cell 13 MARSSIM Evaluation Results Using Severn Trent Laboratories, Inc. Sample Results

The survey unit, Cell 13, passed the MARSSIM¹ Sign Test and the area is considered releasable. Cell 13 consists of subcells E24 to R24, L25 to N25, O26, and the northern portions of subcells E25 to K25. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 13 was performed using the floor VF sample results and the *non-parametric statistical analysis protocols* described in the MARSSIM. There were a total of 74 VF floor samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 74 samples are presented in the table on pages 3 and 4 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for Cell 13 (Attachment page 6), a minimum of 15 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 74 soil sample analyses.

Beginning on page 5 of this Attachment are three COMPASS reports. (See Section 10.1.1 of the main report for details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 6 and 7 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 7) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3 and 4 of this Attachment.

The third report is on pages 8 through 14 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3 and 4. On the first page of this report (Attachment page 8) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 6 of the report (Attachment page 13) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.32. As is explained in Section 10.1.1 of the main report, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 13

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
04953	0.38 J	0.39 J	0.39 J
04954	0.45	8.06	7.13
04957	0.56	1.9	1.94
04956	0.38 J	0.51	0.37 J
01793	0.24 J	0.94	0.92
01794	0.33 J	5.43 J	4.23 J
01795	0.16 J	0.74	0.76
04925	0.47	0.63	0.72
01829	0.21 J	7.38	5.08
01832	0.43	4.69	4.06
04926	0.82	6.09	5.1
01790	0.28 J	3.28	2.52
01791	0.23 U	3.67	2.98
01792	0.28 J	5.91	5.8
01235	0.23 J	1.7 J	1.77 J
01723	0.59	7.9	7.5
01725	0.62	9.6	10.6
01727	0.31 J	4.49	5.18
01236	1.3	2.05	3.21
01237	1.12	1.11	1.07
01238	1.35	0.83	0.84
01239	0.51	1.33	1.3
01722	0.52	9.1	5.39
01724	0.49	2.81	1.82
01726	0.54	5.64	3.59
01291	0.93	1.5	1.4
01292	1.34	2.16	2.31
01293	0.75	6	3.5
01234	1.4	3.16	0.84
01632	0.36 J	11.1	4.17
01368	0.36 J	1.41	0.87
01369	0.21 J	0.66	0.48
01370	0.62	2.36	1.11
01371	0.35 J	3.7	1.77
01378	0.4 J	71.6	7.2
01372	0.48	11.5	5.02
01373	0.29 J	1.44	0.88
01374	0.15 J	1.35	0.94
01375	0.41	0.48	0.41
01376	0.34 J	5.48	3.32
01514	0.23 J	1.18 J	1.14 J
01515	0.37 J	1.08	0.66
01516	0.36	5.9	4.46
01517	0.88	0.56	0.55

Table C.1

Cell 13

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
01415	0.54	2.26	2.1
01416	0.35 J	0.92	0.6
01417	0.23 J	2.36	1.92
01418	0.6	3.34	3.08
01524	0.61	0.93	0.89
01525	0.69	1.12	1.02
01523	0.76 J	1.45	0.96
01522	0.37 J	2.59	2.44
01532	0.47	6.6	5.09
01531	0.77	2.64	2.41
01530	0.51	3.9	4.97
01529	0.49	0.63	0.46
01519	0.49	1.92	1.65
01518	0.18	1	1.05
01520	0.35 J	1.14	0.94
01521	0.59	0.56	0.53
01533	0.6	0.92	0.59
01712	0.22 U	2.35	2.36
01710	0.17 J	2.26 J	2.37 J
01528	0.31 J	1.32	1.06 U
01513	0.2 J	0.42	0.64
01527	0.31 J	0.94	0.92
01178	0.36 J	3.7	3.08
01179	0.53	0.93	1.06
01180	0.74	1.31	1.31
01181	0.71	2.6	2.63
01853	0.67	3.24	2.82
01747	0.36 J	1.62	1.84
01851	0.41	13.3	12.7
01852	0.95	8.4	9.1

Notes:

Cell area = 897 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

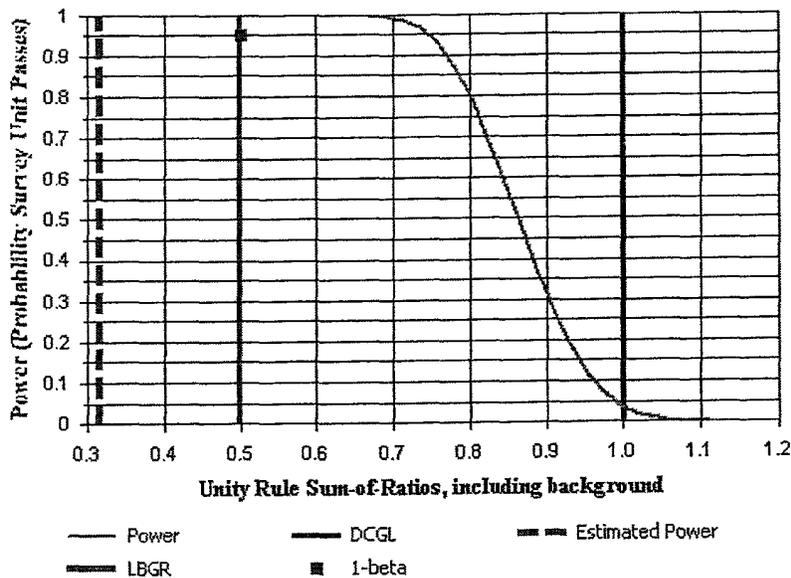


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 13 with STL Data		
Comments:			
Area (m ²):	897	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.22
DCGL (SOR):	1	Sample Size (N):	15
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.32
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	15
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.5 \pm 0.4	N/A
U-234	4.2 \pm 5.7	N/A
U-238	2.7 \pm 6.2	N/A

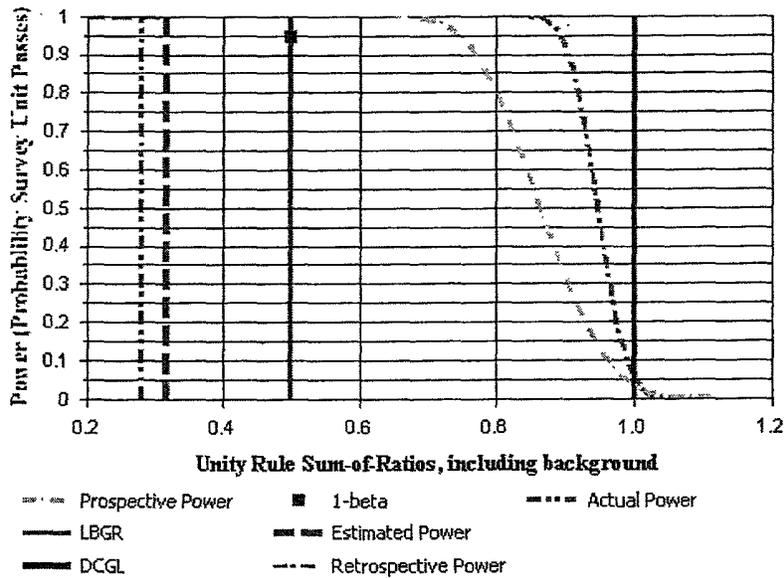


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 13 with STL Data
Report Number: 1
Survey Unit Samples: 74
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
04953	S	0.38	0.39	0.39
04954	S	0.45	8.06	7.13
04957	S	0.56	1.9	1.94
04956	S	0.38	0.51	0.37
01793	S	0.24	0.94	0.92
01794	S	0.33	5.43	4.23
01795	S	0.16	0.74	0.76
04925	S	0.47	0.63	0.72
01829	S	0.21	7.38	5.08
01832	S	0.43	4.69	4.06
04926	S	0.82	6.09	5.1
01790	S	0.28	3.28	2.52
01791	S	0.23	3.67	2.98
01792	S	0.28	5.91	5.8
01235	S	0.23	1.7	1.77
01723	S	0.59	7.9	7.5
01725	S	0.62	9.6	10.6
01727	S	0.31	4.49	5.18
01236	S	1.3	2.05	3.21
01237	S	1.12	1.11	1.07
01238	S	1.35	0.83	0.84
01239	S	0.51	1.33	1.3
01722	S	0.52	9.1	5.39
01724	S	0.49	2.81	1.82
01726	S	0.54	5.64	3.59
01291	S	0.93	1.5	1.4
01292	S	1.34	2.16	2.31
01293	S	0.75	6	3.5
01234	S	1.4	3.16	0.84
01632	S	0.36	11.1	4.17
01368	S	0.36	1.41	0.87
01369	S	0.21	0.66	0.48
01370	S	0.62	2.36	1.11
01371	S	0.35	3.7	1.77
01378	S	0.4	71.6	7.2
01372	S	0.48	11.5	5.02
01373	S	0.29	1.44	0.88
01374	S	0.15	1.35	0.94
01375	S	0.41	0.48	0.41
01376	S	0.34	5.48	3.32
01514	S	0.23	1.18	1.14
01515	S	0.37	1.08	0.66
01516	S	0.36	5.9	4.46
01517	S	0.88	0.56	0.55
01415	S	0.54	2.26	2.1
01416	S	0.35	0.92	0.6
01417	S	0.23	2.36	1.92
01418	S	0.6	3.34	3.08
01524	S	0.61	0.93	0.89
01525	S	0.69	1.12	1.02
01523	S	0.76	1.45	0.96



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
01522	S	0.37	2.59	2.44
01532	S	0.47	6.6	5.09
01531	S	0.77	2.64	2.41
01530	S	0.51	3.9	4.97
01529	S	0.49	0.63	0.46
01519	S	0.49	1.92	1.65
01518	S	0.18	1	1.05
01520	S	0.35	1.14	0.94
01521	S	0.59	0.56	0.53
01533	S	0.6	0.92	0.59
01712	S	0.22	2.35	2.36
01710	S	0.17	2.26	2.37
01528	S	0.31	1.32	1.06
01513	S	0.2	0.42	0.64
01527	S	0.31	0.94	0.92
01178	S	0.36	3.7	3.08
01179	S	0.53	0.93	1.06
01180	S	0.74	1.31	1.31
01181	S	0.71	2.6	2.63
01853	S	0.67	3.24	2.82
01747	S	0.36	1.62	1.84
01851	S	0.41	13.3	12.7
01852	S	0.95	8.4	9.1

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
04953	S	0.15
04954	S	0.46
04957	S	0.28
04956	S	0.15
01793	S	0.12
01794	S	0.31
01795	S	0.09
04925	S	0.19
01829	S	0.32
01832	S	0.33
04926	S	0.52
01790	S	0.22
01791	S	0.22
01792	S	0.33
01235	S	0.15
01723	S	0.52
01725	S	0.63



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
01727	S	0.3
01236	S	0.57
01237	S	0.44
01238	S	0.52
01239	S	0.23
01722	S	0.48
01724	S	0.27
01726	S	0.38
01291	S	0.39
01292	S	0.57
01293	S	0.46
01234	S	0.58
01632	S	0.43
01368	S	0.17
01369	S	0.1
01370	S	0.29
01371	S	0.23
01378	S	1.72
01372	S	0.5
01373	S	0.15
01374	S	0.1
01375	S	0.16
01376	S	0.3
01514	S	0.13
01515	S	0.17
01516	S	0.34
01517	S	0.34
01415	S	0.28
01416	S	0.16
01417	S	0.17
01418	S	0.34
01524	S	0.25
01525	S	0.29
01523	S	0.32
01522	S	0.23
01532	S	0.4
01531	S	0.38
01530	S	0.36
01529	S	0.2
01519	S	0.25
01518	S	0.11
01520	S	0.17
01521	S	0.23
01533	S	0.24
01712	S	0.17
01710	S	0.15
01528	S	0.16
01513	S	0.09
01527	S	0.15
01178	S	0.26
01179	S	0.23



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
01180	S	0.32
01181	S	0.36
01853	S	0.36
01747	S	0.2
01851	S	0.67
01852	S	0.69



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	74	N/A	N=15
Mean (SOR)	0.32	N/A	0.32
Median (SOR)	0.28	N/A	N/A
Std Dev (SOR)	0.22	N/A	0.22
High Value (SOR)	1.72	N/A	N/A
Low Value (SOR)	0.09	N/A	N/A

Statistical Test Summary

S+: 73
 Critical Value: 44
 Result: Pass

Data	DCGLw - Data	Sign
0.15	0.85	+
0.46	0.54	+
0.28	0.72	+
0.15	0.85	+
0.12	0.88	+
0.31	0.69	+
0.09	0.91	+
0.19	0.81	+
0.32	0.68	+
0.33	0.67	+
0.52	0.48	+
0.22	0.78	+
0.22	0.78	+
0.33	0.67	+
0.15	0.85	+
0.52	0.48	+
0.63	0.37	+
0.3	0.70	+
0.57	0.43	+
0.44	0.56	+
0.52	0.48	+
0.23	0.77	+
0.48	0.52	+
0.27	0.73	+
0.38	0.62	+
0.39	0.61	+
0.57	0.43	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.46	0.54	+
0.58	0.42	+
0.43	0.57	+
0.17	0.83	+
0.1	0.90	+
0.29	0.71	+
0.23	0.77	+
1.72	-0.72	-
0.5	0.50	+
0.15	0.85	+
0.1	0.90	+
0.16	0.84	+
0.3	0.70	+
0.13	0.87	+
0.17	0.83	+
0.34	0.66	+
0.34	0.66	+
0.28	0.72	+
0.16	0.84	+
0.17	0.83	+
0.34	0.66	+
0.25	0.75	+
0.29	0.71	+
0.32	0.68	+
0.23	0.77	+
0.4	0.60	+
0.38	0.62	+
0.36	0.64	+
0.2	0.80	+
0.25	0.75	+
0.11	0.89	+
0.17	0.83	+
0.23	0.77	+
0.24	0.76	+
0.17	0.83	+
0.15	0.85	+
0.16	0.84	+
0.09	0.91	+
0.15	0.85	+
0.26	0.74	+
0.23	0.77	+
0.32	0.68	+
0.36	0.64	+
0.36	0.64	+
0.2	0.80	+
0.67	0.33	+
0.69	0.31	+

Cell 14 Status Report

INTRODUCTION

Cell 14 is comprised of the southern portion of subcells U03, V03 and W03 and all of subcells X03 to X25, Y03 to Y25, and Z03 to Z25. Cell 14 is located north of Cell 1 on the 140 Property and adjacent to and east of Cells 1 through 4 mainly on the Nassau County GCDR Property with the western cell boundary overlapping onto the 140 Property, 100 Property and the 70 Property (Cell 14-Figure 1 and Figure 6 in Volume I). Excavation of Cell 14 was performed in two parts. The first part involved the excavation of subcells X03 to X25, Y03 to Y25, and Z03 to Z25. The second part involved the excavation of the southern portion of subcells U03, V03 and W03. These three subcells, north of Cell 1 and Cell 5, for simplicity sake, were configured into Cell 14.

The first part of the excavation of Cell 14 began on October 2, 2003 and was completed on December 10, 2003. Verbal approval to backfill Cell 14, subcells X03 to X10, Y03 to Y10, and Z03 to Z10 was received from NYSDEC representatives on October 21, 2003 and documented in an e-mail on October 29, 2003 (Cell 14-Attachment A, page 1). Verbal approval to backfill Cell 14, subcells X11 to X18, Y11 to Y18, and Z11 to Z18 was received from NYSDEC representatives on November 4, 2003 and documented in an e-mail on November 5, 2003 (Cell 14-Attachment A, page 2). Verbal approval to backfill Cell 14, subcells X19 to X25, Y19 to Y25, and Z19 to Z25 was received from NYSDEC representatives on December 12, 2003 and documented in an e-mail on January 31, 2005 (Cell 14-Attachment A, page 3). A formal request to backfill Cell 14 was submitted in a report to NYSDEC titled *Cell 14 - Attainment of Radiological and Chemical Clean-up Levels* dated January 13, 2004. The report describes the excavation activities and the results from on-Site radiological and chemical analyses of soil samples collected from the excavated surfaces.

The second phase of the excavation of Cell 14, the southern portion of subcells U03, V03 and W03 began on May 14, 2004 and was completed on May 18, 2004. Verbal approval to backfill this excavation was received from NYSDEC representatives on May 19, 2004 and documented in an e-mail on January 31, 2005 (Cell 14-Attachment A, page 3).

Cell 14, subcells X03 to X25, Y03 to Y25, and Z03 to Z25, was backfilled beginning March 4, 2004 and was completed on March 8, 2004. The soils used for backfill came from Spagnoli Road in Melville, New York. Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard*, dated December 20, 2003. Approval to use these soils for backfill was granted from NYSDEC in a letter dated January 5, 2004 (Cell 14-Attachment B, page 1).

Cell 14, subcells U03, V03 and W03, was backfilled beginning May 19, 2004 and was completed on May 20, 2004. The soils used for backfill came from Spagnoli Road in Melville,

New York (SPAG 2). Prior to use as backfill the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the backfill source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling: Supplemental Sampling at Spagnoli Road (SPAG 2), Melville, NY*, dated July 12, 2004. Approval to use these soils for backfill was granted from NYSDEC in a letter dated July 29, 2004 (Cell 14-Attachment B, page 2).

The portion of Cell 14 located on the Nassau County GCDR Property also required an application of topsoil for re-establishing the grass cover; the topsoil application was conducted during May 2005. The topsoil used came from the Oyster Bay Sand and Gravel Company, Riverhead, New York. Prior to using the topsoil, the soils were surveyed for radiation and VOCs using portable hand-held instruments. Radiological and chemical analyses were performed by STL on soil samples collected at the topsoil source. Survey and sample results were submitted to NYSDEC in a report titled *Borrow Soils Characterization Surveys and Sampling Oyster Bay Sand and Gravel (Topsoil), Riverhead, NY*, dated April 29, 2005. Approval to use these soils for topsoil was granted from NYSDEC in a letter dated May 5, 2005 (Cell 14-Attachment B, page 4).

DEPTHS OF EXCAVATION

Cell 14 was excavated to depths ranging from ground surface to approximately 12 ft bgs. The excavation depths for each subcell are provided in Cell 14-Table 1 and are shown on Cell 14-Figure 1. (See Section 6.2.4 in Volume I for a description of how the excavation depths are determined.) A total of 11,352,260 pounds of soil and debris (580 Lift LinersTM) were removed from Cell 14 and shipped to Envirocare for disposal.

ANOMALIES

During excavation of Cell 14, various anomalies were encountered. All anomalies were pipes. A list of Cell 14 anomalies along with analytical results from anomaly samples is provided in Cell 14-Table 2. The approximate location where each anomaly was encountered during excavation activities is shown on Cell 14-Figures 2a and 2b. All of the anomalies encountered during the excavation activities in Cell 14 were sized to fit and placed in Lift LinersTM and shipped to Envirocare for disposal.

GAMMA RADIATION WALKOVER

Once excavation activities were completed in Cell 14, a gamma radiation walkover survey (Cell 14-Figure 3) was performed in accessible areas. The walkover covered 100% of the cell floor.

The walkover survey was performed using a collimated 3-inch NaI detector connected to the LPS to create gamma measurement data in cpm that could be mapped showing the excavation area surveyed. Following the walkover data collection process, the data was downloaded and imported into a spreadsheet for statistical analysis of the data populations using a CFD. Cell 14-Figure 4 depicts a CFD plot of the 2,444 gamma radiation data measurements.

The walkover coverage meets the intent of the MARSSIM¹ guideline for percent of the survey unit area to be scanned. This is based on a review of the walkover survey results and the VF sample results.

VERIFICATION SAMPLING

Verification soil samples were collected (Cell 14-Figures 5a, 5b, 5c, and 5d) to evaluate if the remaining unexcavated soil surfaces met radiological and chemical cleanup levels. The confirmation that radiological cleanup levels had been attained was accomplished using a statistical test as described in the MARSSIM. Details of the MARSSIM evaluations are provided in Cell 14-Attachments C and D. The confirmation that chemical cleanup levels had been attained was accomplished by a direct comparison to the cleanup levels. (See Sections 7.4, 7.5 and 7.6 in Volume I for an explanation of sampling and analysis protocols.) The cell floor samples were collected from each subcell using the Site ABCD Soil Sampling Protocol (Figure 10 in Volume I) with the following exceptions;

- Subcells U03, V03 and W03, the A, B and D samples were not collected from these subcells as only the southern portion of these subcells are part of Cell 14;
- The following samples were not collected: subcell X03, Y03, and Z03, the A samples; subcells Z03 to Z25, the B samples; subcell Z04, the C sample; and subcell X25, the D sample, as those areas of each of the subcells were not excavated because the characterization survey results were below cleanup levels. In addition, a gamma radiation walkover was performed and confirmed that clean-up levels had been attained. The results of this walkover can be found in the Gamma Radiation Walkover Survey section and in Cell 14-Figure 3.
- The B, C, and D samples for X05 and the A sample for X06 were not collected as a test pit was excavated in this area to a depth of approximately 14 ft to confirm that contaminants were not present at this depth. The soil removed from this area was stockpiled in Y05 and was sampled prior to replacement in the excavation. The sample result for the stockpiled soil was used in lieu of the B, C, and D samples for X05 and the A sample for X06. In addition, CF samples were collected from inside the pit at four different depths including the bottom.
- The D sample for X24 was collected in an area that was remediated following the walkover performed by NYSDEC.

In addition to the floor samples described above, an additional 71 VF samples were collected from the walls or at the joint of a wall and floor (Cell 14-Figures 6a and 6b).

All VF samples were analyzed by STL to demonstrate compliance with the Site cleanup levels. The radiological samples were analyzed by gamma spectroscopy using DOE Method GA-01-R

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

MOD for samples collected in 2003. All samples were analyzed by alpha spectroscopy using NAS/DOE Method 3004/RP-725 for isotopic thorium and NAS/DOE Method 3050/RP-725 for isotopic uranium. The chemical samples were analyzed for nickel using USEPA Method 6010B and for VOCs using USEPA Method 8260B.

SYSTEMATIC SOIL SAMPLING

Systematic soil sampling was conducted in Cell 14 to verify that the contamination detected at deeper depths in portions of the adjoining cells to the west (Cells 1 through 4) did not extend into Cell 14. The sampling was performed in subcells X04 to X19. (The depth of excavation in Cell 14 from rows 20 through 24 was the same as the adjoining areas of Cell 4.) The borings were advanced using a 12" encased machine auger. Two borings were advanced per subcell, approximately 5 ft east of the sheet pile wall and to the depth of excavation in the subcell immediately to the west. As Cell 3 had not yet been excavated, the Cell 14 subcells east of Cell 3 were advanced to a depth of 26 ft. NYSDEC verbally agreed to the auger-sampling protocol. The soil sample results confirmed that Cell 14 did not have to be excavated to the same depth as the cells to the west.

Additional soil borings were conducted following the Phase I soil remediation. The results indicated that some constituents remain above the cleanup levels below the design engineering limits. The results were reported to NYSDEC in Table 3 of *Subsurface Soil Sampling and Analysis Report, Cells 3, 4, 12, 14 and Golf Course Driving Range Subsurface Soil Delineation*, Rev 1: October 2005.

RESULTS

The radiological, PCE, TCE, and nickel results for STL analyses of the VF floor samples are provided in Cell 14-Table 3 and are shown on Cell 14-Figures 5a, 5b, 5c and 5d. Cell 14-Table 4 presents the maximum radiological, TCE, PCE, and nickel results from the STL analysis of VF floor samples. The radiological, PCE, TCE, and nickel results for STL analyses of the VF wall samples are provided in Cell 14-Table 5 and are shown on Cell 14-Figures 6a and 6b. The radiological, PCE, TCE, and nickel results for on-Site and STL analyses of the systematic soil samples are provided in Cell 14-Table 6 and are shown on Cell 14-Figures 7a and 7b.

The radiological results for verification sampling of the excavation floor were evaluated in accordance with the MARSSIM using the COMPASS² software, which is approved by the NRC. Since the MARSSIM guideline for maximum size for a Class 1 Area is 2,000 square meters (m²) and the total area of Cell 14 exceeds 2,000 m², Cell 14 was divided into two survey units for the MARSSIM analysis. The first survey unit consists of subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14. The second survey unit consists of subcells X15 to X25, Y15 to Y25, and Z15 to Z25. Both survey units passed this evaluation (Cell 14-Attachments C and D). See Section 8.0 in Volume I for additional details on the MARSSIM protocol.

²COMPASS software, Version 1.0.0, was developed under the sponsorship of the U.S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

CONCLUSION

Based on STL VF sample results, the radiological and chemical Site cleanup levels were attained for Cell 14.

Tables

Cell 14-Table 1:	Cell 14 Subcell Excavation Depths
Cell 14-Table 2:	Cell 14 Anomaly Sample Results
Cell 14-Table 3:	Cell 14 Summary of Verification Floor Sample Results Severn Trent Laboratories, Inc.
Cell 14-Table 4:	Cell 14 Maximum Verification Floor and Wall Sample Results Severn Trent Laboratories, Inc.
Cell 14-Table 5:	Cell 14 Summary of Verification Wall Sample Results Severn Trent Laboratories, Inc.
Cell 14-Table 6:	Cell 14 Systematic Soil Boring Sample Results Severn Trent Laboratories, Inc.

Figures

Cell 14-Figure 1:	Cell 14 Excavation Depth Contours
Cell 14-Figure 2a:	Cell 14 (Subcells U03, V03, W03, X03 to X11, Y03 to Y11, Z03 to Z11) Anomalies
Cell 14-Figure 2b:	Cell 14 (Subcells X12 to X25, Y12 to Y25, Z12 to Z25) Anomalies
Cell 14-Figure 3:	Cell 14 Post-Excavation Gamma Radiation Walkover Survey Results
Cell 14-Figure 4:	Cumulative Frequency Distribution for Cell 14 Gamma Radiation Walkover Survey Data
Cell 14-Figure 5a:	Cell 14 (Subcells U03, V03, W03, X03 to X10, Y03 to Y10, and Z03 to Z10) Verification Floor Sample Locations and Results
Cell 14-Figure 5b:	Cell 14 (Subcells X11 to X14, Y11 to Y14, and Z11 to Z14) Verification Floor Sample Locations and Results
Cell 14-Figure 5c:	Cell 14 (Subcells X15 to X18, Y15 to Y18, and Z15 to Z18) Verification Floor Sample Locations and Results
Cell 14-Figure 5d:	Cell 14 (Subcells X19 to X25, Y19 to Y25, and Z19 to Z25) Verification Floor Sample Locations and Results
Cell 14-Figure 6a:	Cell 14 (Subcells U03, V03, W03, X03 to X11, Y03 to Y11, and Z03 to Z11) Verification Wall Sample Locations and Results
Cell 14-Figure 6b:	Cell 14 (Subcells X17 to X25, Y17 to Y25, Z17 to Z25) Verification Wall Sample Locations and Results
Cell 14-Figure 7a:	Cell 14 (Subcells X03 to X10) Systematic Soil Boring Locations and Results
Cell 14-Figure 7b:	Cell 14 (Subcells X11 to X25) Systematic Soil Boring Locations and Results

Attachments

- Cell 14-Attachment A: E-Mails from NYSDEC to GTEOSI dated October 29, 2003, November 5, 2003 and January 31, 2005
- Cell 14-Attachment B: Letters from NYSDEC to GTEOSI dated January 5, 2004, July 29, 2004, and May 5, 2005.
- Cell 14-Attachment C: Cell 14, Subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results
- Cell 14-Attachment D: Cell 14, Subcells X15 to X25, Y15 to Y25, and Z15 to Z25 MARSSIM Evaluation Results Using Severn Trent Laboratory, Inc. Sample Results

**Cell 14-Table 1
Subcell Excavation Depths**

U03 0 ft.	V03 0-4 ft.	W03 0-4 ft.	X03 0-6 ft.	Y03 0-4 ft.	Z03 0-4 ft.	
Cell 1			X04 0-8 ft.	Y04 0-6 ft.	Z04 0-4 ft.	
			X05 4-12 ft.	Y05 0-6 ft.	Z05 0-4 ft.	
			X06 4-12 ft.	Y06 0-6 ft.	Z06 0-4 ft.	
			X07 4-8 ft.	Y07 4-8 ft.	Z07 0-4 ft.	
	Cell 2			X08 4-10 ft.	Y08 0-6 ft.	Z08 0-4 ft.
				X09 4-12 ft.	Y09 0-6 ft.	Z09 0-4 ft.
				X10 6-10 ft.	Y10 0-6 ft.	Z10 0-4 ft.
			X11 6-10 ft.	Y11 0-8 ft.	Z11 0-4 ft.	

**Cell 14-Table 1
Subcell Excavation Depths**

Cell 3	X12	Y12	Z12
	6-10 ft.	4-8 ft.	0-6 ft.
	X13	Y13	Z13
	6-10 ft.	4-8 ft.	0-6 ft.
	X14	Y14	Z14
	6-10 ft.	4-8 ft.	0-6 ft.
	X15	Y15	Z15
	8-12 ft.	4-10 ft.	0-6 ft.

**Cell 14-Table 1
Subcell Excavation Depths**

Cell 4	X16	Y16	Z16
	4-10 ft.	4-8 ft.	0-6 ft.
	X17	Y17	Z17
	6-10 ft.	4-8 ft.	0-6 ft.
	X18	Y18	Z18
	4-10 ft.	4-8 ft.	0-6 ft.
	X19	Y19	Z19
	0-6 ft.	0-6 ft.	0-4 ft.
	X20	Y20	Z20
	0-6 ft.	0-4 ft.	0-4 ft.
Non-Impacted	X21	Y21	Z21
	0-6 ft.	0-4 ft.	0-4 ft.
	X22	Y22	Z22
	0-6 ft.	0-6 ft.	0-6 ft.
	X23	Y23	Z23
	4-6 ft.	0-6 ft.	0-6 ft.
	X24	Y24	Z24
	0-6 ft.	0-4 ft.	0-4 ft.
	X25	Y25	Z25
	0-6 ft.	0-4 ft.	0-4 ft.

Notes:
Excavation depths are approximate.
 Subcell Boundary
 Cell Boundary

Cell 14-Table 2
Anomaly Sample Results

Date	Sample ID	Sample Description	Depth (ft)	Material	Moisture (%)	Specific Gravity	Dry Density (pcf)	Wet Density (pcf)	Moisture Ratio (%)	Liquid Limit (%)	Plasticity Index (%)	Soil Classification	Standard Deviation		Coefficient of Variation		Remarks			
													Moisture	Density	Moisture	Density				
Pipe	11/1/2003	07054	85013	X29	1' (1.4' dia)	3	NS	155.20	8.17	NA	1.87	Under Pipe	NS	10	77	0.140	0.086 U	NS	One Alpha and Beta Sinner for samples 07054, 07055.	
Pipe	11/2/2003	07055	85012	X20	1' (1.4' dia)	3.5	NS	9.77	0.46	NA	0.13	Under Pipe	NS	NS	NS	0.088 U	0.088 U	NS	Pipe in 3 pieces	
Pipe	10/20/2003	08324	85024	X17	4" (dia)	4	NS	48.07	2.78 J	NA	1.78	Under Ball	<MCA	<MCA	4000	0.119	0.084 U	NS	Pipe broken by sheet piling.	
Pipe	10/20/2003	08400	AD-1008	X05&07&08	8" (1.4' dia)	4	NS	45.67	2.38	NA	1.19	Under Pipe	<MCA	<MCA	54,381	0.093	0.074 U	NS		
Pipe	10/20/2003	05688	AD-1008	X08&07&08	8" (1.4' dia)	4	NS	38.07	2.05	NA	2.23	Under Ball	NS	NS	NS	0.172	0.083 U	NS		
Pipe	10/10/2003	05870	AD-1070	X09&003	4" (dia)	4	NS	59.80	2.72	NA	1.78	Under Ball	<MCA	<MCA	1020	0.092	0.088 U	NS		
Pipe	10/13/2003	05835	AE-1073	X10	4" (dia)	5	NS	108.28	5.18	NA	0.64	Under Pipe	NS	NS	NS	0.109	0.085 U	NS		
Pipe	10/15/2003	08817	AH-1075	X10&X11	4" (dia)	5	NS	87.39	3.91	NA	1.02	Under Pipe	<MCA	<MCA	80	0.105	0.088 U	NS		
Pipe	10/16/2003	08070	AL-1076	X11	4" (dia)	5	NS	112.83	5.50	NA	0.97	Under Ball	NS	NS	NS	0.118	0.074 U	NS		
Pipe	NS	NS	AJ-1076	X11	1.5" (dia)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Pipe	10/20/2003	08310	AK-1070	X18	4" (dia)	4	NS	38.84	1.81	NA	1.43	NS (Lined)	NS	NS	NS	0.117 J	0.088 U	NS	Broken by sheet piling	
Pipe	NS	NS	AL-1020	X17	1" (dia)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Pipe	10/22/2003	08384	AM-1072	X18	4" (dia)	4	NS	50.27	2.53	NA	1.01	Next to Pipe	NS	NS	NS	0.056	0.083 U	NS	Pipe cut by sheet piling	
Pipe	10/23/2003	08480	AN-1073	X15	4" (dia)	4	NS	35.71	1.75	NA	1.10	Under Ball	NS	NS	NS	0.208	0.088 U	NS	Pipe cut by sheet piling	
Pipe	NS	NS	AO-1074	X14	4" (dia)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Pipe	10/28/2003	08810	AP-1078	X13&X14	4" (dia)	4	NS	87.78	2.14 J	NA	1.39	Under Pipe	<MCA	<MCA	35,478	0.025	0.088 U	NS		
Pipe	10/30/2003	08733	AQ-1040	X12	4" (dia)	4	NS	105.98	4.13	NA	1.20	Under Pipe	NS	NS	NS	0.081 U	0.085 U	NS		
Pipe	NS	NS	AR-1178	X19	4" (dia)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Pipe	NS	NS	AS-11018	X19	4" (dia)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Pipe fragments.

**Cell 14-Table 2
Anomaly Sample Results**

Analyses:	
Th-232 - Thorium-232	TCE - Trichloroethane
U-234 - Uranium-234	PCE - Tetrachloroethane
U-235 - Uranium-235	N - Nickel
U-238 - Uranium-238	
Units:	
pCi/g - picocurie/gram	cpm - counts per minute
mg/kg - milligram/kilogram	dpm/100 cm ² - disintegrations per minute/100 square centimeters
Qualifiers:	
U - Validation qualifier used to indicate that the result was qualified as non-detect.	
J - Validation qualifier used to indicate that the result is considered an estimate.	
Notes:	
See Cell 14-Forme 2a and 2b for sample locations.	
Samples were analyzed on Site for radionuclides (Th-232 and U-238) using the gamma spectroscopy system.	
NA - Analysis was not performed.	
NS - Not sampled.	
MDA - Minimum Detectable Activity.	
Due to an artifact in the laboratory data reporting program, the on-Site analytical data should be interpreted to two significant figures.	

Cell 14-Table 3
 Summary of Verification Floor Sample Results
 Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	TB-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
U03	C	15360	0.5	0.45	1.13	0.95	0.0026 U	0.0026 U	8.8
V03	C	15365	1.5	0.90	1.37	1.25	0.00017 J	0.0059 J	9.3
W03	C	15364	4.0	1.25	2.98	2.75	0.0027 U	0.00077 J	35.3
X03	B	05840	3.7	0.79	1.37	1.21 J	0.00031 J	0.0027 U	11.2
X03	C	05841	4.1	0.57	0.50	0.62 J			
X03	D	05842	3.4	0.59	1.92	1.25 J			
X04	A	05859	4.8	1.09	3.05	2.69			
X04	B	05860	4.7	0.30 J	0.57 J	0.33 J			
X04	C	05861	4.4	0.73	1.45	1.12			
X04	D	05862	4.3	0.83	0.90 J	0.76	0.0026 U	0.0026 U	4.0 J
X05	A	06047	7.5	0.44	0.38 J	0.43 J	0.0026 U	0.0026 U	2.1 J
X06	B	06048	7.0	0.67	0.68 J	0.74			
X06	C	06049	6.5	1.03	1.17	1.06	0.0025 U	0.0025 U	2.1 J
X06	D	06050	6.9	0.71	0.97	0.72 J			
X07	A	06033	5.9	0.13 J	0.44 J	0.34 J	0.00083 J	0.0026 U	1.9 J
X07	B	06034	5.4	0.45	0.34 J	0.37 J			
X07	C	06035	7.7	0.48	1.39	1.54			
X07	D	06036	5.4	0.38 J	1.33	1.55			
X08	A	06205	7.3	0.45	2.1	1.5			
X08	B	06206	5.6	0.7	0.47 J	0.76			
X08	C	06207	5.3	0.38 J	0.85	0.79	0.0012 J	0.0026 U	2.5 J
X08	D	06208	8.4	0.49	1.82	1.79			
X09	A	06226	7.6	0.67	1.45 J	1.56			
X09	B	06227	6.6	0.45	0.44 J	0.53 J	0.0026 U	0.0026 U	1.4 J
X09	C	06228	7.5	0.15 J	6.08	5.7			
X09	D	06229	10.9	0.45	0.36 J	0.53 J			
X10	A	06236	7.5	0.57	1.86 J	2.01			
X10	B	06237	7.1	0.36 J	0.33 J	0.42 J			
X10	C	06239	7.0	0.58	1.81 J	1.81	0.0026 U	0.0026 U	2.2 J
X10	D	06240	8.5	0.35	4.05	4.32			
X11	A	06754	7.6	0.20 J	0.55 J	0.67 J			
X11	B	06755	7.7	0.85	3.45	3.20	0.0026 U	0.0026 U	2.2 J
X11	C	06756	7.3	0.29 U	0.86 J	0.98 J			
X11	D	06757	10.8	0.4 U	3.47	3.49			
X12	A	06797	8.3	0.42	0.43 J	0.47 J			
X12	B	06798	8.0	0.58	0.38 J	0.37 J			
X12	C	06799	9.1	0.16 J	0.26 J	0.27 J			
X12	D	06800	9.4	0.18 J	0.41 J	0.44 J	0.0026 U	0.0026 U	4.0 J
X13	A	06783	8.2	0.42	0.51 J	0.51 J	0.0026 U	0.0026 U	2.6 J
X13	B	06784	7.8	0.53	0.51 J	0.56 J			
X13	C	06785	7.9	0.21 J	0.28 J	0.23 J			
X13	D	06786	8.0	0.44	4.04	3.75			
X14	A	06623	9.4	0.77	0.40 J	0.47 J			
X14	B	06624	9.9	0.18 J	0.35 J	0.31 J			

Cell 14-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
X14	C	06625	10.0	0.16 J	0.40 J	0.46 J	0.0026 U	0.0026 U	9.9
X14	D	06627	9.4	0.42	0.68	0.95			
X15	A	06575	10.8	0.26 U	0.61 J	0.56 J			
X15	B	06576	10.7	0.43 U	0.42 J	0.29 J			
X15	C	06577	10.7	0.26 J	0.59 J	0.59 J	0.0026 U	0.0026 U	4.2 U
X15	D	06578	9.7	0.17 U	0.33 J	0.61 J			
X16	A	06528	7.5	0.32 U	0.62 J	0.56 J			
X16	B	06529	6.2	0.31 U	0.47 J	0.46 J			
X16	C	06530	9.7	0.25 J	0.42 J	0.39 J			
X16	D	06531	5.1	0.23 J	0.4 J	0.35 J	0.0025 U	0.0025 U	2.2 J
X17	A	06481	9.3	0.28 J	0.97 J	1.17			
X17	B	06482	9.1	0.14 U	0.33 J	0.58 J	0.0025 U	0.0025 U	3.8 J
X17	C	06483	9.5	0.86	0.74 J	0.77 J			
X17	D	06484	7.9	1.73	1.58	1.67			
X18	A	06473	8.9	0.46	1.72	1.44	0.0026 U	0.00033 J	3.2 J
X18	B	06474	7.8	0.98	1.48 J	1.21			
X18	C	07104	7.3	0.57	0.54 J	0.57 J	0.0025 U	0.0025 U	4.1 U
X18	D	06475	7.3	1.13	2.13	2.08			
X19	A	07105	4.8	1.27	1.95	2.05	0.0027 U	0.00057 J	6.6
X19	B	07106	3.7	1.48	9.24	9.60			
X19	C	07107	2.8	0.91	8.18	7.09			
X19	D	07108	5.2	0.57	0.79	0.87			
X20	A	07109	3.2	0.97	4.59	4.85			
X20	B	07110	4.0	1.29	1.46	1.20			
X20	C	07111	4.5	1.34	3.41	2.70	0.0030 U	0.0021 J	15.7
X20	D	07112	4.3	0.62	1.33	1.11			
X21	A	07113	4.0	0.82	3.96	4.30			
X21	B	07114	3.8	0.98	5.72	5.50			
X21	C	07115	3.8	1.54	10.0	11.4			
X21	D	07116	4.5	0.22 J	0.84	0.73	0.0025 U	0.0025 U	2.6 J
X22	A	07117	4.0	1.46	2.04	2.19			
X22	B	07118	3.4	1.27	4.92	4.79	0.0016 J	0.0037	15.2
X22	C	07119	3.4	1.40	2.92	2.68			
X22	D	07120	2.5	1.06	5.78	5.29			
X23	A	07204	5.4	1.16	2.95	3.32	0.0026 U	0.0026 U	5.4
X23	B	07205	5.6	0.63	0.78 J	0.78 J			
X23	C	07206	6.1	0.37 J	0.92 J	0.88 J			
X23	D	07207	5.3	0.62	0.92 J	0.91 J			
X24	A	07197	4.0	1.1	3.83	4.01			
X24	B	07198	4.1	1.14	4.73	4.67			
X24	C	07199	3.8	1.03	3.55	3.51	0.0029 U	0.00078 J	20.0
X24	D	07280	4.2	1.27	6.97	7.04	0.0034 U	0.0049 U	19.7
X25	A	07194	4.5	1.46	2.26	2.25			
X25	B	07195	4.5	1.28	1.25	1.39	0.0029 U	0.0029 U	11.0

Cell 14-Table 3
 Summary of Verification Floor Sample Results
 Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
X25	C	07196	4.0	1.28	1.28	1.48			
Y03	B	05848	2.8	0.85	0.83	0.80 J			
Y03	C	05851	3.1	0.56	0.76	0.48 J			
Y03	D	05852	1.3	0.57	1.05 J	1.45 J	0.00047 J	0.0026 U	3.9 J
Y04	A	05864	2.9	0.53 J	0.45 J	0.57 J	0.0021 J	0.0025 U	1.7 J
Y04	B	05865	3.3	0.63	0.84 J	0.66 J			
Y04	C	05866	2.4	0.34 J	0.65 J	0.81 J			
Y04	D	05867	2.6	0.44	0.49 J	0.49 J			
Y05	A	06826	3.6	0.45	0.50 J	0.48 J			
Y05	B	06827	3.8	0.50	0.37 J	0.45 J			
Y05	C	06828	4.4	0.46	0.60 J	0.45 J	0.0026 U	0.0026 U	4.1 U
Y05	D	06829	3.9	0.74	0.52 J	0.56 J			
Y06	A	06051	3.6	0.77	0.73 J	0.64 J			
Y06	B	06052	4.4	0.40 J	1.23	1.42			
Y06	C	06053	3.8	0.70	0.75 J	0.68 J	0.0026 U	0.0026 U	3.4 J
Y06	D	06054	6.6	0.83	0.82 J	0.66 J			
Y07	A	06041	7.2	0.65	0.73 J	0.80			
Y07	B	06042	4.3	0.96	2.10	1.74			
Y07	C	06043	4.2	0.25 J	0.67 J	0.40 J	0.0026 U	0.0026 U	1.5 J
Y07	D	06044	3.3	0.79	0.64 J	0.57 J			
Y08	A	06178	4.1	0.79	0.85 J	0.95			
Y08	B	06179	4.3	0.93	2.17	1.73			
Y08	C	06177	4.0	0.22 J	0.98	1.10	0.0031	0.0026 U	2.7 J
Y08	D	06180	3.8	0.49	0.68 J	0.70			
Y09	A	06173	4.1	0.86	0.83	0.83 J	0.00077 J	0.0025 U	2.0 J
Y09	B	06174	3.8	0.42	0.82	0.72 J			
Y09	C	06175	4.2	0.94	0.54	0.57 J			
Y09	D	06176	4.2	0.16 J	0.30 J	0.53 J			
Y10	A	06193	4.1	1.22	0.61 J	0.89			
Y10	B	06195	4.5	0.26 J	0.44 J	0.41 J			
Y10	C	06198	4.5	1.31	0.95	0.74			
Y10	D	06199	4.9	0.24 J	0.46 J	0.47 J	0.0068	0.0026 U	1.7 J
Y11	A	06747	4.5	0.16 J	0.58 J	0.43 J			
Y11	B	06748	4.5	0.17 J	0.45 J	0.54 J			
Y11	C	06749	5.3	0.26 J	0.64 J	0.32 J	0.0025 U	0.0025 U	1.7 J
Y11	D	06750	5.5	0.22 J	0.50 J	0.40 J			
Y12	A	06787	5.3	0.29 U	0.32 J	0.19 J			
Y12	B	06788	5.1	0.53	0.50 J	0.46 J			
Y12	C	06789	5.3	0.28 J	0.34 J	0.34 J			
Y12	D	06790	5.7	0.33 J	0.38 J	0.43 J	0.0026 U	0.0026 U	2.3 J
Y13	A	06774	5.7	0.31 J	0.60 J	0.36 J			
Y13	B	06775	5.1	0.26 J	0.43 J	0.36 J			
Y13	C	06776	5.7	0.61	0.43 J	0.33 J	0.0025 U	0.0025 U	3.2 J
Y13	D	06777	5.9	0.39 J	0.42 J	0.32 J			

Cell 14-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PGE (mg/kg)	Ni (mg/kg)
Y14	A	06629	5.8	0.16 J	0.52 J	0.43 J	0.0027 U	0.0027 U	4.1 J
Y14	B	06630	4.3	0.27 J	0.37 J	0.34 J			
Y14	C	06631	5.8	0.31 J	0.61 J	0.48 J			
Y14	D	06632	6.3	0.46	1.44	1.28			
Y15	A	06571	7.4	0.77	0.73 J	0.59 J	0.0026 U	0.0026 U	4.1 U
Y15	B	06572	6.2	0.24 J	0.81 J	0.57 J			
Y15	C	06573	6.8	0.57	0.64 J	0.4 J			
Y15	D	06574	7.8	0.29 J	0.33 J	0.37 J			
Y16	A	06532	6.5	0.25 J	0.6 J	0.33 J	0.0025 U	0.00020 J	4.1 U
Y16	B	06533	5.5	0.45	1.77	1.44			
Y16	C	06534	7.4	0.16 J	0.5 J	0.51 J			
Y16	D	06535	7.3	0.17 J	0.42 J	0.48 J			
Y17	A	06469	7.1	0.28 J	0.71 J	0.57 J			
Y17	B	06470	6.3	0.51	0.44 J	0.63 J			
Y17	C	06471	5.6	0.97	0.97 J	0.57 J			
Y17	D	06472	5.6	1.17	0.96 J	0.85 J	0.0026 U	0.0026 U	3.8 J
Y18	A	06460	5.0	0.4	0.32 J	0.41 J			
Y18	B	06461	5.2	0.39 J	0.51 J	0.56 J			
Y18	C	07103	5.3	0.56	0.86	0.57 J	0.0026 U	0.0026 U	1.9 J
Y18	D	06462	5.0	0.66	0.96 J	0.96 J	0.0028 U	0.0028 U	2.0 J
Y19	A	07121	3.8	0.59	1.63	1.56			
Y19	B	07122	3.5	1.25	4.22	4.33			
Y19	C	07123	3.7	0.37 J	0.38 J	0.50			
Y19	D	07124	2.9	0.82	0.70 J	0.68	0.0026 U	0.0026 U	4.2 U
Y20	A	07125	3.7	0.64	0.63 J	0.69			
Y20	B	07126	3.7	1.10	3.46	3.83			
Y20	C	07127	3.8	0.85	0.55 J	0.57 J	0.0025 U	0.0025 U	4.1 U
Y20	D	07128	2.8	1.12	1.38	1.33			
Y21	A	07129	3.9	0.87	0.77 J	1.06	0.0026 U	0.0026 U	3.8 J
Y21	B	07130	4.0	1.36	5.55	6.00			
Y21	C	07131	4.0	0.94	1.12	0.89			
Y21	D	07132	3.0	0.90	2.07	1.64			
Y22	A	07169	3.8	0.79	0.96	1.18			
Y22	B	07170	4.6	0.82	0.53 J	0.58 J			
Y22	C	07171	3.8	0.72	0.63 J	0.75 J	0.0026 U	0.0026 U	4.1 U
Y22	D	07172	3.4	0.85 J	3.65	3.32			
Y23	A	07173	4.3	0.28 U	0.62 J	0.43 J			
Y23	B	07174	5.3	0.36 U	0.53 J	0.63 J	0.0026 U	0.0026 U	1.9 J
Y23	C	07175	5.0	1.01	0.95	0.93 J			
Y23	D	07176	4.1	0.40 J	1.01	0.87 J			
Y24	A	07187	2.5	1.30	2.37	2.62			
Y24	B	07188	3.0	1.25	4.42	4.51	0.0030 U	0.00082 J	9.7
Y24	C	07189	2.6	1.39	1.69	1.68			
Y24	D	07190	2.1	0.72	6.71	6.23			

Cell 14-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Y25	A	07200	2.9	0.69	0.85 J	0.81 J			
Y25	B	07201	3.7	1.3	0.76 J	0.95 J	0.0026 U	0.0026 U	3.2 J
Y25	C	07202	3.1	0.82	1.05 J	0.88 J			
Y25	D	07203	2.8	1.6	1.22 J	0.84 J			
Z03	C	05888	0.8	1.24	3.05	3.01	0.00034 J	0.00031 J	9.5
Z03	D	05889	1.8	0.86	0.77 J	0.96			
Z04	A	05857	1.1	1.14	1.74	1.62			
Z04	D	05858	1.7	0.83	0.89	0.77 J	0.0025 U	0.0025 U	0.92 J
Z05	A	06020	0.1	0.87	4.14	4.19	0.0028 U	0.0028 U	6.9
Z05	C	06021	2.0	1.02	2.67	2.04			
Z05	D	06830	2.9	0.59	0.77	0.44 J	0.0026 U	0.0026 U	4.2 U
Z06	A	06022	1.9	0.79	3.25	3.13			
Z06	C	06023	2.4	1.18	5.09	5.35	0.0026 U	0.0026 U	4.2
Z06	D	06024	3.0	0.44	0.85	0.84			
Z07	A	06027	2.5	0.90	3.75	3.63			
Z07	C	06028	2.6	0.54	0.87	0.96			
Z07	D	06029	2.6	0.81	1.40	1.40	0.0028 U	0.0028 U	5.9
Z08	A	06184	2.5	0.50	1.11 J	1.15 J	0.010	0.00024 J	4.3
Z08	C	06185	2.4	0.74	2.03	1.79			
Z08	D	06186	2.5	0.59	1.08	1.20			
Z09	A	06181	2.2	1.19	2.51	2.55			
Z09	C	06182	2.4	0.71	1.94	1.60			
Z09	D	06183	2.2	0.77	0.93	0.99	0.0084	0.0026 U	3.6 J
Z10	A	06189	2.5	0.88	0.93	1.11			
Z10	C	06190	2.7	0.70	2.02	2.36			
Z10	D	06191	2.7	0.33 J	0.35 J	0.21 J	0.0030	0.0025 U	3.5 J
Z11	A	06744	2.8	0.63	2.36	2.44			
Z11	C	06745	2.9	0.46	1.96	2.13			
Z11	D	06746	3.1	0.38 J	0.55 J	0.56 J	0.0026 U	0.0026 U	1.5 J
Z12	A	06791	3.1	0.80	1.62	1.55			
Z12	C	06792	3.5	0.39 J	0.51 J	0.44 J			
Z12	D	06793	3.0	0.52	0.54 J	0.59 J	0.0026 U	0.0026 U	4.1 U
Z13	A	06780	2.8	0.46	2.25	2.12			
Z13	C	06781	2.9	0.96	2.80	2.86	0.0029 U	0.00075 J	10.6
Z13	D	06782	3.1	0.37 J	0.42 J	0.67			
Z14	A	06634	2.8	0.78	2.39	2.44			
Z14	C	06635	3.4	0.54	0.68 J	0.64 J			
Z14	D	06637	3.0	0.56	1.08	0.56 J	0.0026 U	0.0026 U	4.1 J
Z15	A	06568	2.5	0.67	1.49	1.43			
Z15	C	06569	2.5	0.94	2.08	1.99			
Z15	D	06570	3.2	0.29 U	0.48 J	0.37 J	0.0027 U	0.0027 U	3.2 J
Z16	A	06536	2.6	0.58	2.12	2.13			
Z16	C	06537	3.2	0.57	1.23	1.26			
Z16	D	06538	3.5	0.45	0.51 J	0.4 J	0.0026 U	0.00021 J	3.5 J

Cell 14-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
Z17	A	06466	3.3	0.31 J	0.52 J	0.54 J			
Z17	C	06467	3.5	0.52	1.21 J	1.02 J			
Z17	D	06468	4.1	0.48	0.83 J	0.71 J	0.0026 U	0.0026 U	1.7 J
Z18	A	06457	3.5	0.69	0.92 J	0.96 J			
Z18	C	06458	3.3	1.32	7.59	7.88			
Z18	D	06459	3.7	0.4	0.38 J	0.54 J	0.0029 U	0.0029 U	4.7 U
Z19	A	07149	3.4	1.51	5.09	5.22			
Z19	C	07150	3.5	1.46	4.04 J	3.98 J			
Z19	D	07151	2.7	1.04	6.53	6.31	0.0031 U	0.0060	11.6
Z20	A	07153	3.5	1.05	4.08	4.05			
Z20	C	07154	3.4	0.97	9.05 J	8.11 J	0.0032 U	0.0057	8.8
Z20	D	07155	2.8	1.41	4.82	4.72			
Z21	A	07156	3.2	1.60	7.89	8.27			
Z21	C	07157	3.3	1.76	12.8	12.6	0.0032 U	0.0021 J	13.6
Z21	D	07158	3.0	1.72	8.74	8.50			
Z22	A	07178	4.2	1.13	0.96	0.74 J	0.0026 U	0.0026 U	2.3 J
Z22	C	07179	4.0	0.76	1.03	0.80 J			
Z22	D	07180	4.2	1.24 J	1.06	0.89 J			
Z23	A	07181	4.2	0.59 J	0.55 J	0.44 J			
Z23	C	07182	3.3	0.96 J	1.47	1.40	0.0026 U	0.0026 U	2.7 J
Z23	D	07183	3.9	2.34 J	0.57 J	0.77 J			
Z24	A	07184	2.7	1.41	8.54	8.12			
Z24	C	07185	2.3	1.22	5.82	5.83			
Z24	D	07186	1.8	1.08	6.92	6.62	0.0031 U	0.0021 J	12.3
Z25	A	07191	2.1	1.04	4.97	4.78	0.0033 U	0.0015 J	11.2
Z25	C	07192	2.0	1.37	5.08	3.91			
Z25	D	07193	1.5	1.06	4.4	4.56			

Cell 14-Table 3
Summary of Verification Floor Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 14-Figures 5a, 5b, 5c, and 5d for sample information.

Blank cell indicates analysis was not performed.

**Cell 14 -Table 4
Maximum Verification Floor and Wall Sample Results
Severn Trent Laboratories, Inc.**

Analyte	VF Type	Sample Result	Sample Depth (ft. bgs)	Subcell
Maximum Th-232 (pCi/g)	Floor	2.34 J	3.9	Z23
	Wall	1.67	4.1	X20
Maximum U-234 (pCi/g)	Floor	12.8	3.3	Z21
	Wall	6.83	4.1	X20
Maximum U-238 (pCi/g)	Floor	12.6	3.3	Z21
	Wall	5.97	4.1	X20
Maximum TCE (mg/kg)	Floor	0.010	2.5	Z08
	Wall	0.0045	6.3	X08
Maximum PCE (mg/kg)	Floor	0.0060	2.7	Z19
	Wall	0.015 J	2.6	X24
Maximum Ni (mg/kg)	Floor	35.3	4.0	W03
	Wall	29.9	3.6	V03

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

J - Validation qualifier used to indicate that the result is considered an estimate.

Cell 14-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Orientation	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-235 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
V03	VV	15363	1.0	1.0	4.92	5.17	0.00031 J	0.0019 J	19.2
V03	VN	16127	3.6	1.20	1.45	1.29	0.0027 U	0.0027 U	29.9
W03	WE	15361	2.0	0.83	0.98	0.90	0.0026 U	0.0026 U	5.1
X03	WE	05838	1.0				0.0027 U	0.0027 U	8.0
X03	VV	05843	1.7	0.98	0.95	0.90 J	0.00069 J	0.0026 U	5.9
X03	FW	05844	3.4	0.92	1.93	1.61	0.0027	0.00047 J	11.4
X03	FE	05839	3.7	1.38	1.52	1.50	0.0027 U	0.0027 U	8.0
X07	WS	06038	6.1	0.43 U	1.12	1.23	0.0026 U	0.0026 U	4.0 J
X07	WS	06037	7.8	0.36 J	1.18	0.89	0.0026 U	0.0026 U	0.59 J
X07	WS	06040	8.9	0.40	1.34	0.96	0.0026 U	0.0026 U	1.6 J
X07	FS	06039	10.5	0.28 J	1.67	1.62	0.0026 U	0.0026 U	2.4 J
X08	WS	06219	6.3	0.63	1.88	1.77	0.0045	0.0026 U	2.8 J
X08	VN	06223	6.6	1.1	0.74 J	0.69	0.0027 U	0.0027 U	2.4 J
X08	FN	06220	6.7	0.59	0.95	0.61 J	0.0026 U	0.0026 U	1.0 J
X08	WS	06225	7.7	0.64	1.32 J	1.2	0.0026 U	0.0026 U	2.9 J
X08	VN	06222	8.3	0.35 J	0.96 J	0.77	0.0026 U	0.0026 U	2.3 J
X08	VN	06221	9.2	0.23 J	0.95	0.66	0.0026 U	0.0026 U	1.1 J
X08	FS	06224	9.8	0.25 J	0.67 J	0.66	0.0026 U	0.0026 U	0.90 J
X09	WS	06251	7.5	0.5	0.79 J	0.79	0.0019 J	0.0026 U	3.0 J
X09	VN	06246	7.7	0.72	1.05 J	0.98	0.0026 U	0.0026 U	1.6 J
X09	WS	06250	8.9	0.17 J	0.5 J	0.4 J	0.0026 U	0.0026 U	1.6 J
X09	VN	06244	9.0	0.29 J	1.07 J	1.28	0.00032 J	0.0026 U	1.3 J
X09	FN	06243	11.2	0.47	1.31 J	0.97	0.00050 J	0.0026 U	1.1 J
X09	FS	06248	11.7	0.24 J	0.63 J	0.59	0.0015 J	0.0026 U	1.6 J
X10	VN	06256	7.4	0.88	2.39	1.84	0.0038	0.0026 U	2.8 J
X10	WS	06259	8.8	0.48	1.05 J	1.15 J	0.00024 J	0.0026 U	1.6 J
X10	VN	06255	9.9	0.25 J	0.58 J	0.43 J	0.00058 J	0.0026 U	0.40 J
X10	FS	06258	10.1	0.22 J	0.72 J	0.55 J	0.0026 U	0.0026 U	0.87 J
X10	FN	06254	11.2	0.14 J	0.98 J	0.93	0.0013 J	0.0026 U	3.4 J
X11	WS	06752	9.3	0.22 J	0.22 J	0.31 J	0.0025 U	0.0025 U	1.5 J
X11	VN	06758	9.5	0.16 J	1.49 J	1.65 J	0.0025 U	0.0025 U	1.7 J
X11	FS	06753	10.1	0.20 J	0.94 J	0.66 J	0.0026 U	0.0026 U	1.8 J
X11	FN	06759	10.4	0.33 J	2.45	2.44	0.0025 U	0.0025 U	0.98 J
X17	VN	06487	8.0	1.24	0.88 J	0.93 J	0.0026 U	0.0026 U	4.1 J
X17	FN	06488	9.0	0.69	1.68	1.61	0.0026 U	0.0026 U	4.1 U
X17	WS	06485	9.4	0.71	1.51	1.26 J	0.0026 U	0.0026 U	4.7
X17	FS	06486	10.6	0.7	1.67	1.6	0.0026 U	0.0026 U	2.8 J
X18	WS	06476	7.1	0.84	1.12 J	0.91 J	0.0026 U	0.0026 U	3.2 J
X18	VN	06478	9.2	0.61	0.69 J	0.57 J	0.0026 U	0.0026 U	1.9 J
X18	FS	06477	9.8	0.58	1.29 J	1.15	0.0026 U	0.0026 U	3.1 J
X18	FN	06479	10.2	0.58	1.42 J	0.89 J	0.0026 U	0.0026 U	4.0 J
X19	VN	07134	3.8	1.36	3.74	2.97	0.0032 U	0.0013 J	13.5
X19	WS	07136	3.9	1.40	3.10 J	2.39 J	0.0032 U	0.0012 J	11.8
X19	FS	07135	4.9	0.56	2.06	1.80	0.0025 U	0.0025 U	2.8 J
X19	FN	07133	5.4	0.44	1.06	1.05	0.0026 U	0.0026 U	3.3 J
X20	VN	07138	4.1	1.67	6.83	5.97	0.0031 U	0.0024 J	14.8

Cell 14-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Subcell	Sample Orientation	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCE (mg/kg)	Ni (mg/kg)
X20	FS	07139	4.5	0.54	3.23	2.86	0.0026 U	0.0026 U	4.2 U
X20	FN	07137	5.6	0.98	4.65	3.46	0.0026 U	0.00069 J	5.2
X21	FS	07144	4.8	1.00	4.87	5.48	0.0025 U	0.0025 U	6.4
X21	FN	07143	5.1	0.54	3.54	2.90	0.0026 U	0.00029 J	5.0
X22	FW	07142	4.2	0.75	2.09	1.87	0.0025 U	0.0025 U	3.8 J
X22	FN	07141	4.3	0.74	3.84	3.29	0.0025 U	0.0025 U	3.8 J
X24	WE	07211	2.6	1.42	4.82	4.17	0.00033 J	0.015 J	17.7
X24	FE	07210	4.8	1.05	1.05 J	0.89 J	0.0025 U	0.0025 U	5.6
Y03	WW	05853	0.4	0.83	1.29	1.18 J	0.0026 U	0.0026 U	6.8
Y03	WE	05845	1.1	0.74	1.00	1.28 J	0.00089 J	0.0026 U	4.5
Y03	FW	05854	1.8	0.29 J	0.40	0.36 J	0.0025 U	0.0025 U	6.7
Y03	FE	05847	2.1	0.74	0.57	0.70 J	0.0026 U	0.0026 U	3.9 J
Y06	WS	06056	5.8	0.29 J	0.52 J	0.37 J	0.0027 U	0.0027 U	1.8 J
Y06	FS	06055	7.0	0.30 J	0.58 J	0.43 J	0.0026 U	0.0026 U	1.3 J
Y07	WN	06046	5.4	0.26 J	0.44 J	0.42 J	0.0026 U	0.0026 U	1.4 J
Y07	FN	06045	6.8	0.64	0.58 J	0.57 J	0.0026 U	0.0026 U	1.9 J
Z03	WW	05890	0.5	0.76	1.60	1.52	0.0026 U	0.0026 U	4.8
Z03	FW	05891	1.4	0.50	0.48 J	0.52 J	0.0025 U	0.0025 U	1.3 J
Z06	FS	06026	4.5	0.78	0.92	0.91	0.0026 U	0.0026 U	2.5 J
Z06	FW	06025	4.9	0.22 J	0.94	0.99	0.0026 U	0.0026 U	2.6 J
Z07	WW	06031	3.5	0.71	1.82	2.05	0.0027 U	0.0027 U	5.4
Z07	FN	06030	4.3				0.0027 U	0.0027 U	4.9
Z07	FW	06032	4.9	0.50	1.02	1.17	0.0027 U	0.0027 U	6.4

Cell 14-Table 5
Summary of Verification Wall Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 14-Figures 6a and 6b for sample identifications and associated locations.

FE - Floor East.

FN - Floor North.

FS - Floor South.

FW - Floor West.

WE - Wall East.

WN - Wall North.

WS - Wall South.

WW - Wall West.

Cell 14-Table 6
Systematic Soil Boring Sample Results
Severn Trent Laboratories, Inc.

Subcell	Boring Location	Sample ID	Depth (feet)	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)	TCE (mg/kg)	PCP (mg/kg)	Ni (mg/kg)
X04	N	07026	14.0	0.49	0.75 J	0.94 J	0.0026 U	0.0026 U	6.3
X04	S	07031	13.0	0.33 J	0.42 J	0.5 J	0.0026 U	0.0026 U	3.1 J
X05	N	07043	16.0	0.16 J	0.36 J	0.32 J	0.0026 U	0.0026 U	1.9 J
X05	S	07046	16.0	0.2 J	0.39 J	0.36 J	0.0026 U	0.0026 U	2 J
X06	N	07049	25.0	0.18 J	0.51 J	0.38 J	0.0026 U	0.0026 U	2.1 J
X06	S	07059	25.0	0.18 J	0.31 J	0.33 J	0.0026 U	0.0026 U	1.6 J
X07	N	07072	25.0	0.43	0.46 J	0.4 J	0.0026 U	0.0026 U	2.3 J
X07	S	07080	26.0	0.37 U	0.39 J	0.35 J	0.0026 U	0.0026 U	1.9 J
X08	N	07087	20.0	0.22 J	0.5 J	0.52 J	0.0029 U	0.0029 U	2.9 J
X08	S	07095	20.0	0.31 J	0.42 J	0.42 J	0.0026 U	0.0026 U	2.1 J
X09	N	07100	20.0	0.16 U	0.42 J	0.39 J	0.0026 U	0.0026 U	4.1 U
X09	S	07102	20.0	0.15 U	0.42 J	0.4 J	0.0026 U	0.0026 U	4.1 U
X10	N	07147	26.0	0.17 J	0.36 J	0.51 J	0.0026 U	0.0026 U	4.1 U
X10	S	07168	26.0	0.19 J	0.58 J	0.48 J	0.0026 U	0.0026 U	2.5 J
X11	N	07238	24.0	0.36 J	0.79 J	0.52 J	0.0026 U	0.0026 U	2 J
X11	S	07230	24.0	0.17 U	0.18 J	0.27 J	0.0026 U	0.0026 U	1.5 J
X12	N	07219	26.0	0.101 J	0.53 J	0.26 J	0.0026 U	0.0026 U	1.4 J
X12	S	07215	26.0	0.2 J	0.53 J	0.29 J	0.0026 U	0.0026 U	1.7 J
X13	N	07212	26.0	0.26 J	0.37 J	0.33 J	0.0026 U	0.0026 U	4.1 U
X13	S	07251	26.0	0.16 J	0.4 J	0.31 J	0.0026 U	0.0026 U	2.8 J
X14	N	07275	26.0	0.14 U	0.33 J	0.29 J	0.0026 U	0.0026 U	1.6 J
X14	S	07331	26.0	0.18 J	0.18 J	0.26 J	0.0026 U	0.0026 U	1.4 J
X15	N	07315	26.0	0.24 J	0.47 J	0.29 J	0.0026 U	0.0026 U	2 J
X15	S	07372	26.0	0.22 J	0.16 U	0.4 J	0.0026 U	0.0026 U	1.4 J
X16	N	07356	25.0	0.16 U	0.32 J	0.24 J	0.0026 U	0.0026 U	1.7 J
X16	S	07401	26.0	0.19 J	0.37 J	0.24 J	0.0026 U	0.0026 U	2.3 J
X17	N	07426	26.0	0.22 J	0.34 J	0.36 J	0.0026 U	0.0026 U	4.5 J
X17	S	07461	25.0	0.16 U	0.23 J	0.27 J	0.0026 U	0.0026 U	2.1 J
X18	N	07477	24.0	0.31 U	0.22 J	0.22 J	0.0026 U	0.0026 U	2.2 J
X18	S	07541	24.0	0.061 J	0.25 J	0.35 J	0.0026 U	0.0026 U	2.2 J
X19	N	07573	24.0	0.37 J	0.41 J	0.31 J	0.0026 U	0.0026 U	1.9 J
X19	S	07615	24.0	0.2 J	0.32 J	0.21 J	0.0026 U	0.0026 U	1.4 J

Cell 14-Table 6
Systematic Soil Boring Sample Results
Severn Trent Laboratories, Inc.

Analytes:

Th-232 - Thorium-232

U-234 - Uranium-234

U-238 - Uranium-238

TCE - Trichloroethene

PCE - Tetrachloroethene

Ni - Nickel

Units:

pCi/g - picoCurie/gram

mg/kg - milligram/kilogram

Qualifiers:

U - Validation qualifier used to indicate that the result was qualified as non-detect.

J - Validation qualifier used to indicate that the result is considered an estimate.

Notes:

See Cell 14-Figures 7a and 7b for boring locations.

Cell 14 - Figure 2a
 (Subcells U03, V03, W03, X03 to X11, Y03 to Y11, Z03 to Z11)
 Anomalies

Legend

- Pipes
- Property Line
- Subcell Boundaries
- Cell Boundaries

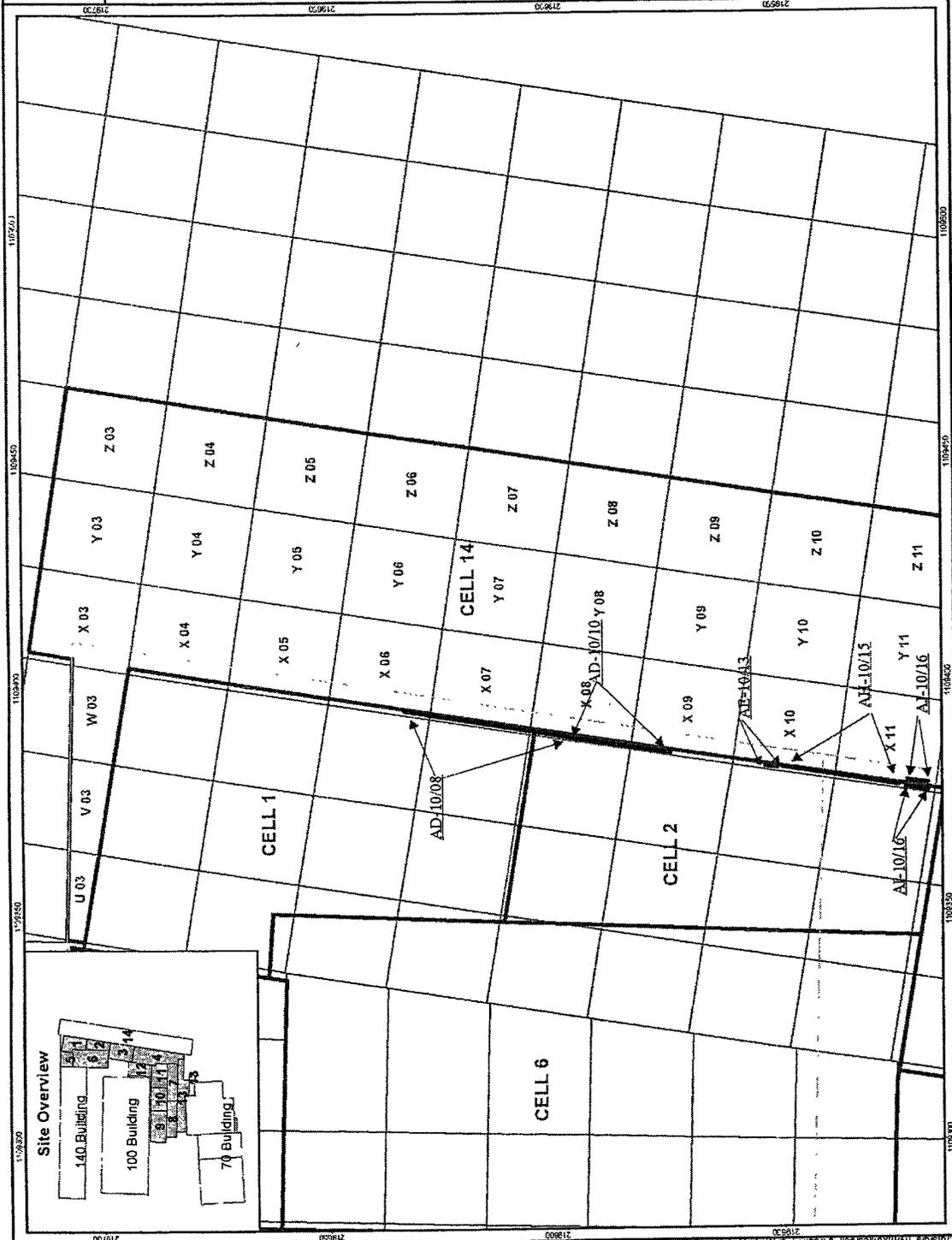
See Cell 14-Table 2 for summarized sample results.

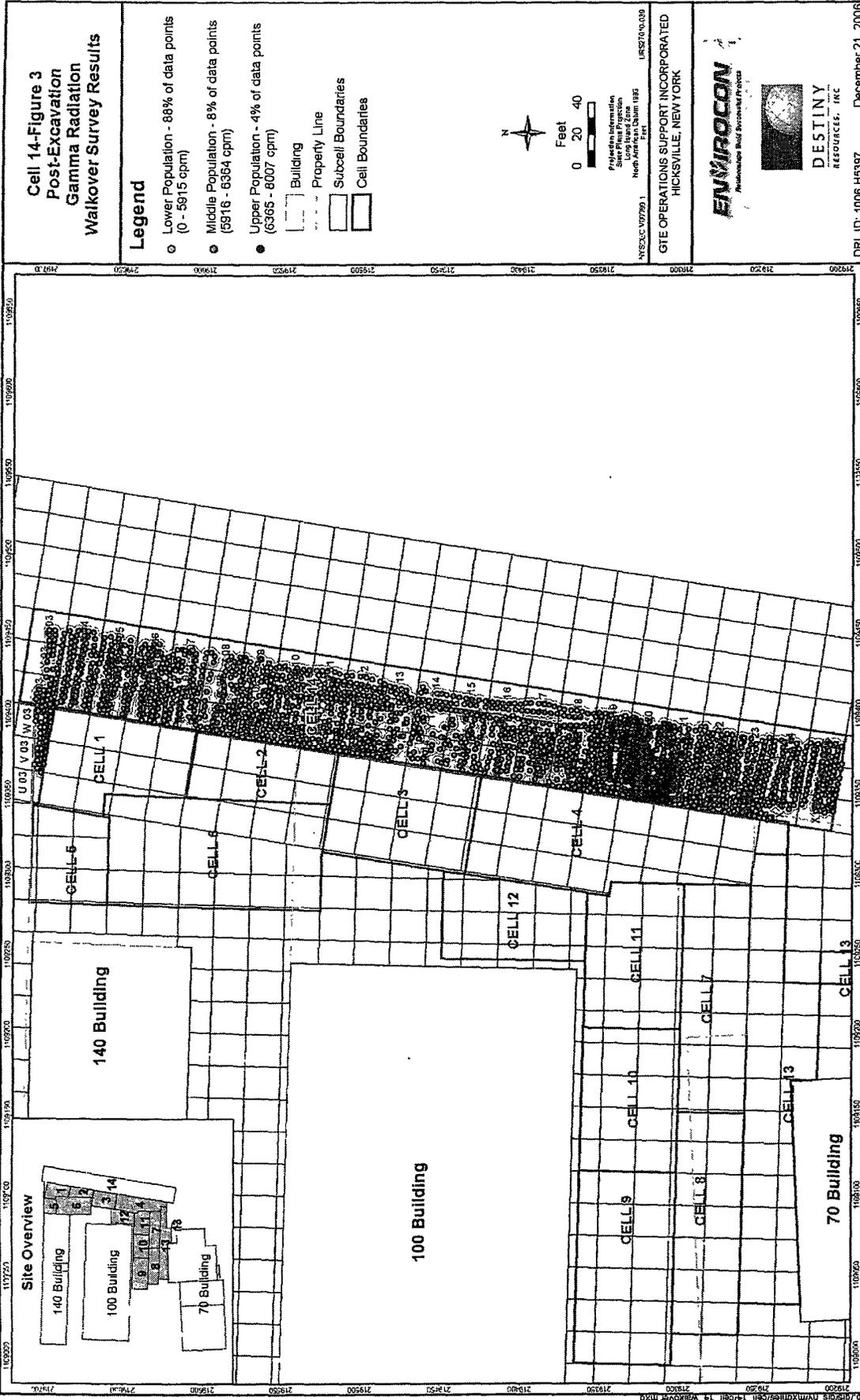
URS 2010.03.03
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

ENVIROCON
 Environmental Remediation Services

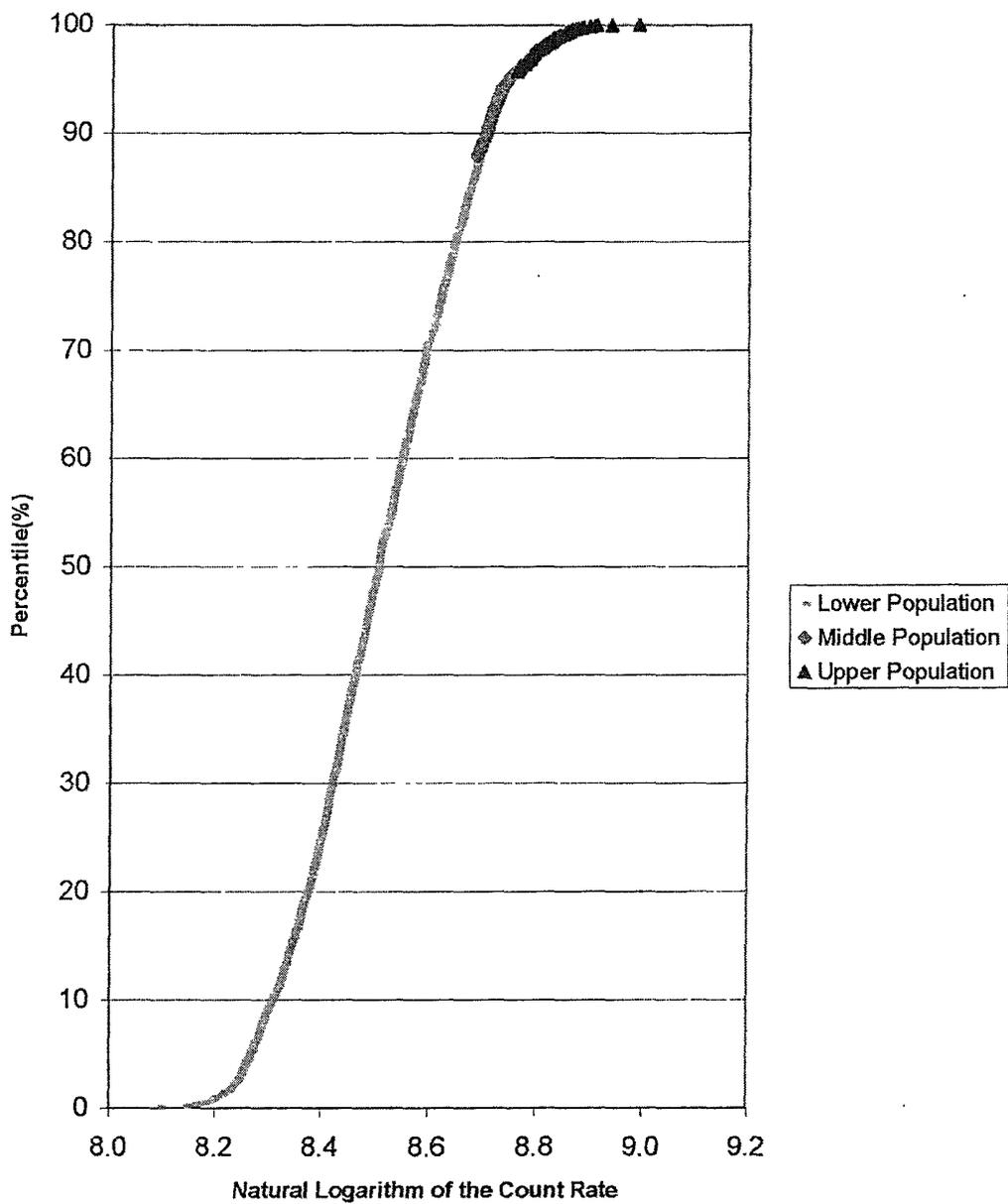
DESTINY
 RESOURCES, INC.

DRI ID: 1003.H6138 December 21, 2006





Cell 14-Figure 4
Cumulative Frequency Distribution for
Gamma Radiation Walkover Data



Cell 14-Figure 5b
 (Subcells X11 to X14,
 Y11 to Y14, and Z11 to Z14)
 Verification Floor Sample
 Locations and Results

- Legend**
- Sample Locations
 - Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries
- Label Key**
 [Date]
 Sample Type [Sample ID] (Depth)
 Sample Results

- Depth in feet lbs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

See Cell 14-Table 3 for summarized sample results.



Feet
 0 10 20

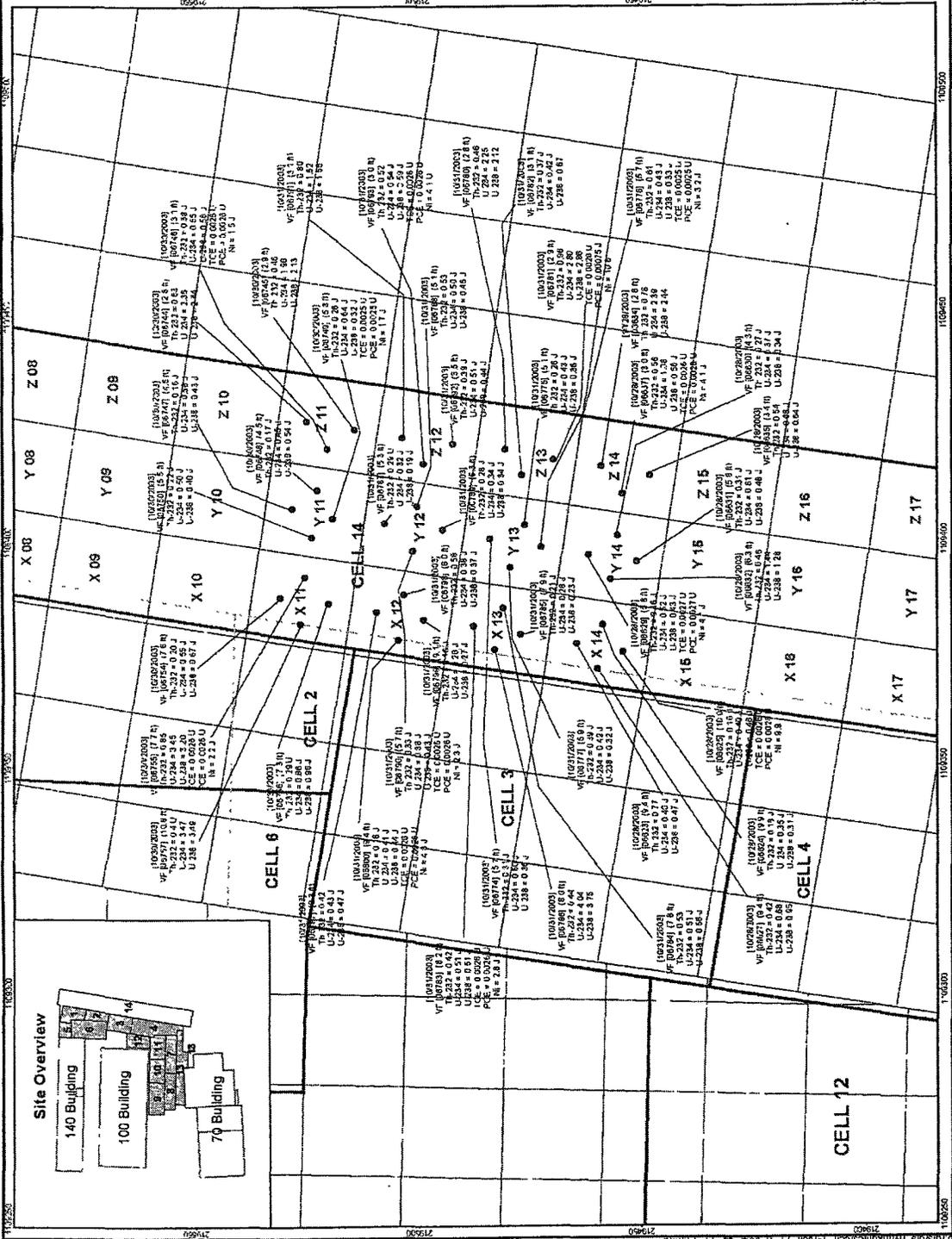
Regulation Information
 Sampling Location
 Long Island Zoning
 Health American Council (198)

USSECCUR008-1 USSECCUR008-2

GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



DRL ID: 1006 H6380 December 21, 2006



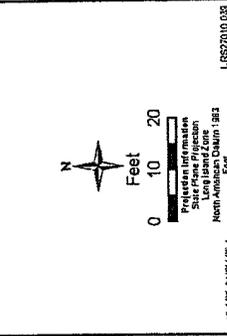
Cell 14-Figure 5c
 (Subcells X15 to X18,
 Y15 to Y18, and Z15 to Z18)
 Verification Floor Sample
 Locations and Results

- Legend**
- Sample Locations
 - - - Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

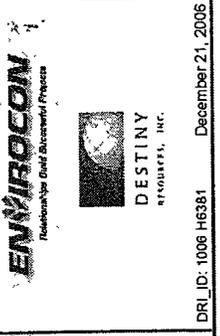
Label Key
 [Date]
 Sample Type [Sample ID] (Depth)
 Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

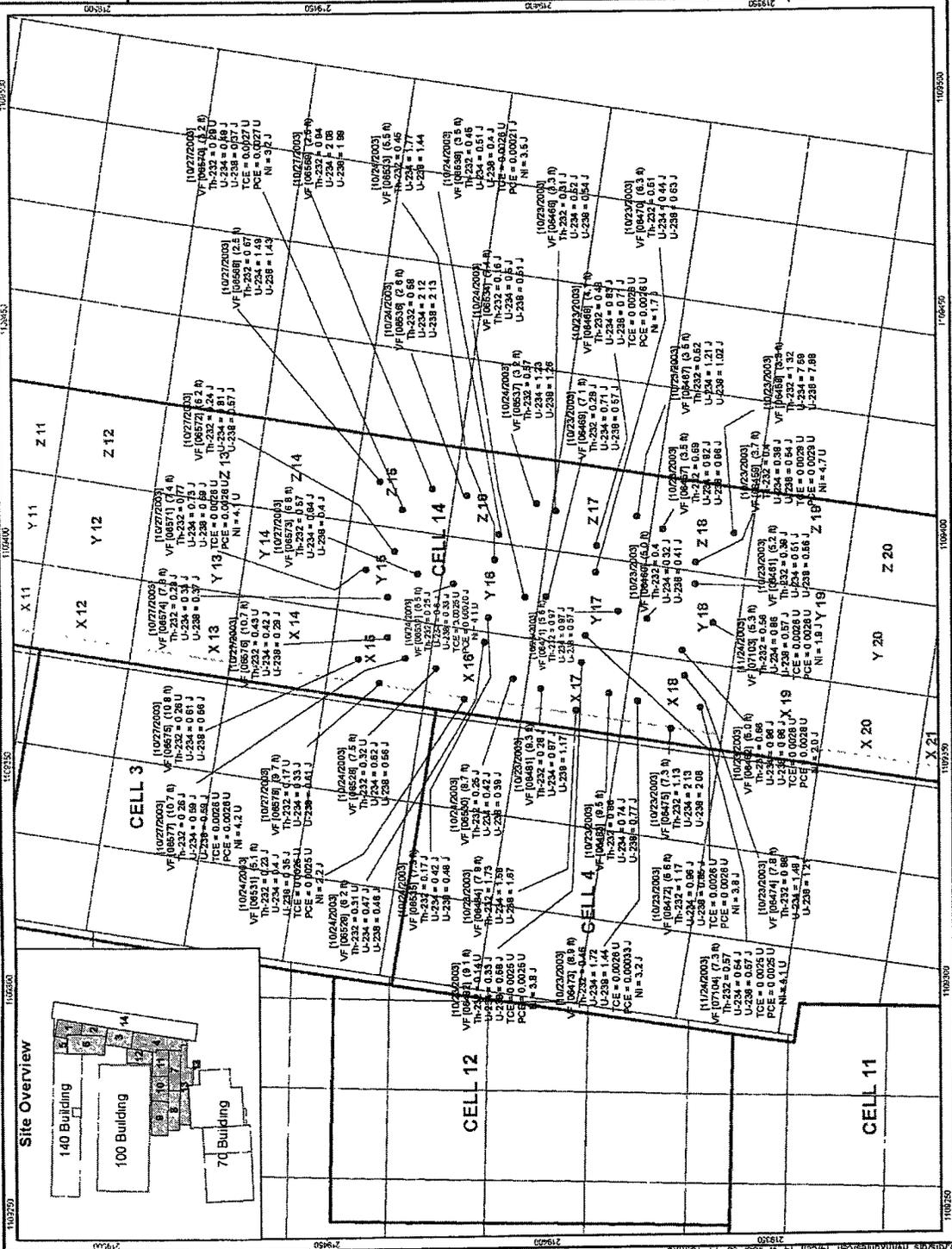
See Cell 14-Table 3 for summarized sample results.



AS-SEC-VT6065-1
 GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



DRI_ID: 1008 H6381 December 21, 2005



Cell 14-Figure 5d
 (Subcells X19 to X25,
 Y19 to Y25, and Z19 to Z25)
 Verification Floor Sample
 Locations and Results

- Legend**
- Sample Locations
 - Property Line
 - ▭ Subcell Boundaries
 - ▭ Cell Boundaries

Label Key
 [Date]
 Sample Type [Sample ID] (Depth)
 Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

See Cell 14-Table 3 for summarized sample results.



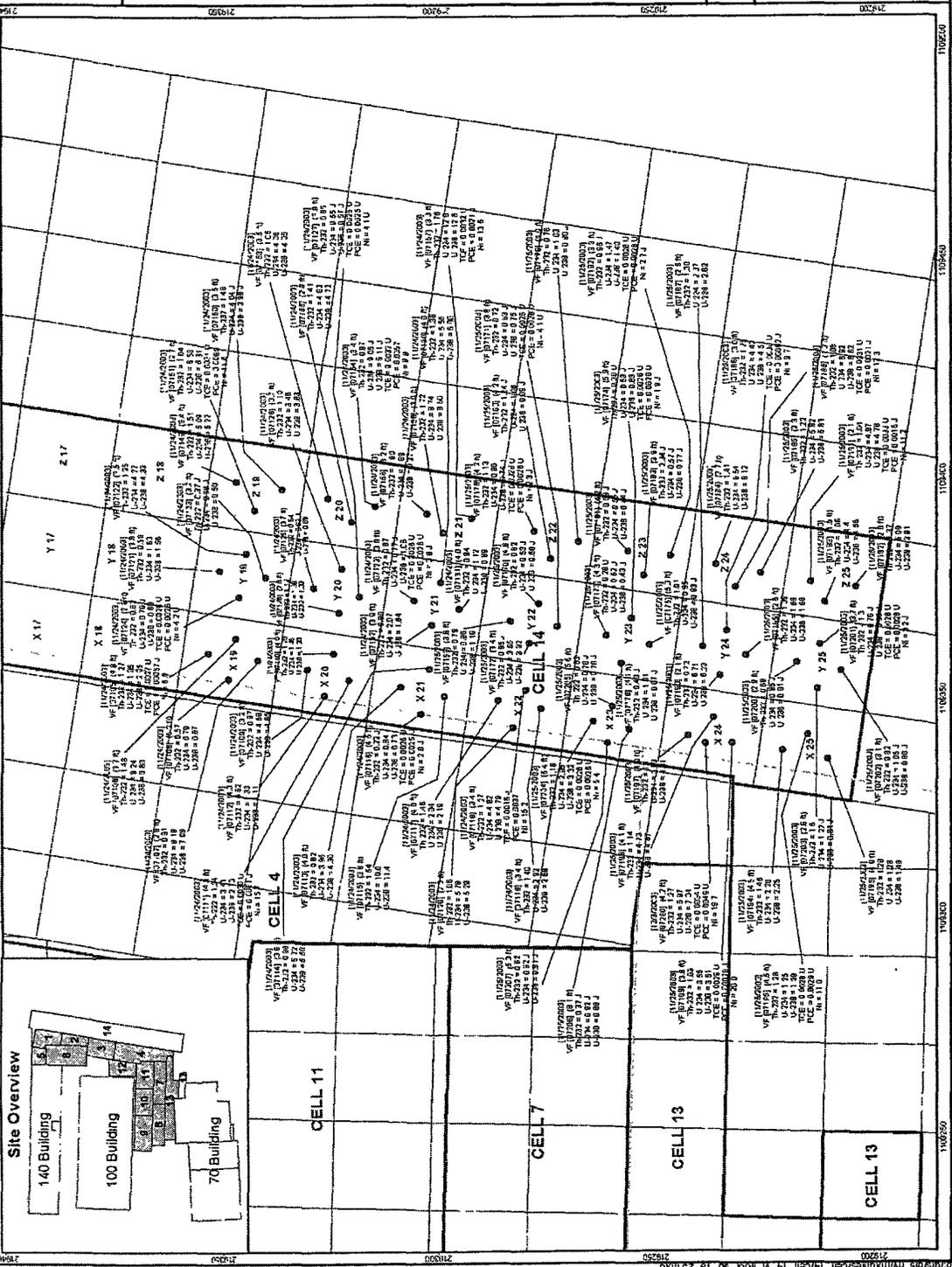
Feet
 0 10 20

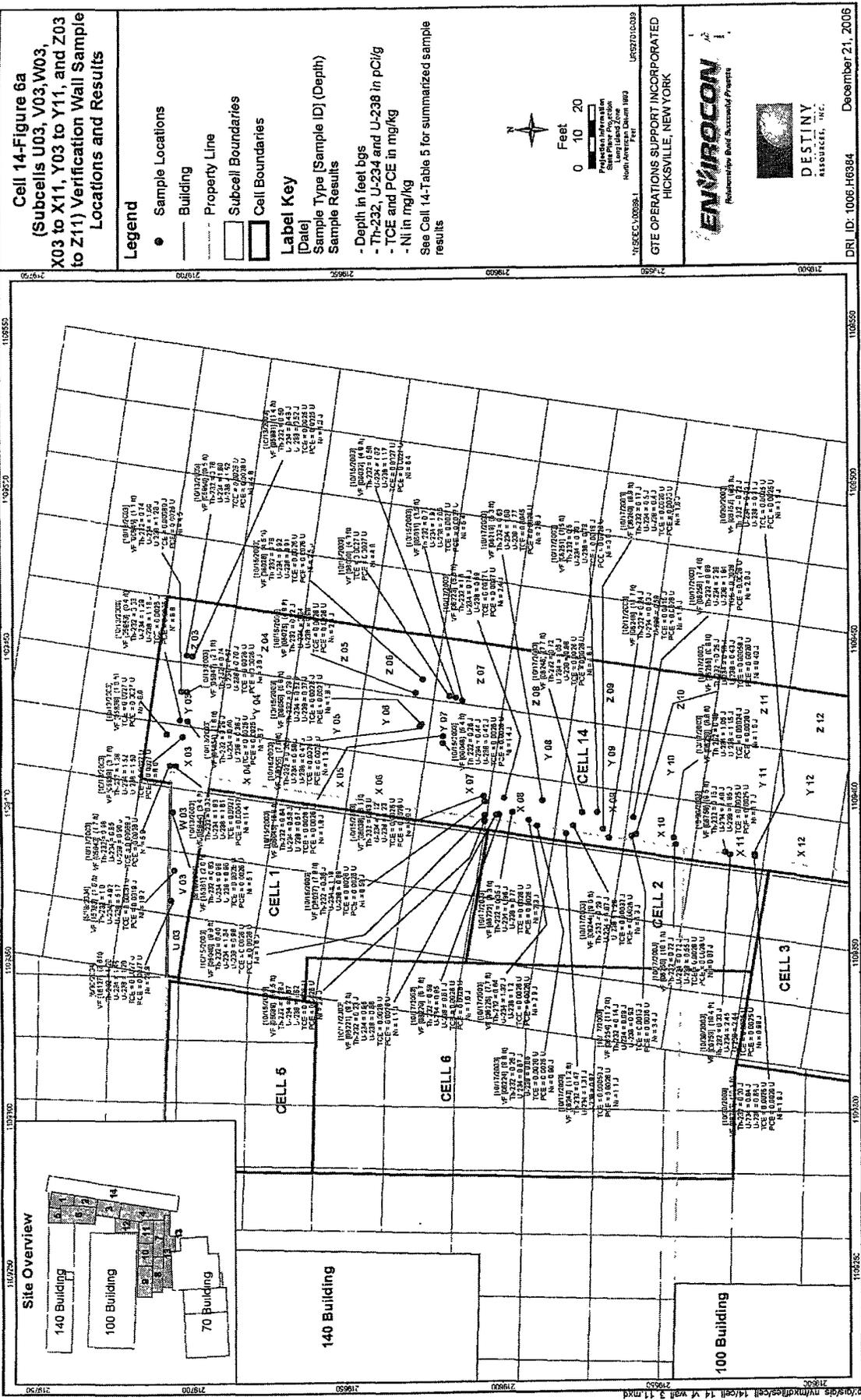
Projection information:
 State Plane
 Long Island Zone
 North American Datum 1983
 UTM
 EPSG:1801

GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK



DR_ID - 1006.H6382 December 21, 2008





Cell 14-Figure 6a
 (Subcells U03, V03, W03, X03 to X11, Y03 to Y11, and Z03 to Z11) Verification Wall Sample Locations and Results

Legend

- Sample Locations
- ▭ Building
- Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key
 [Date]
 Sample Type [Sample ID] (Depth)
 Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- NI in mg/kg

See Cell 14-Table 5 for summarized sample results

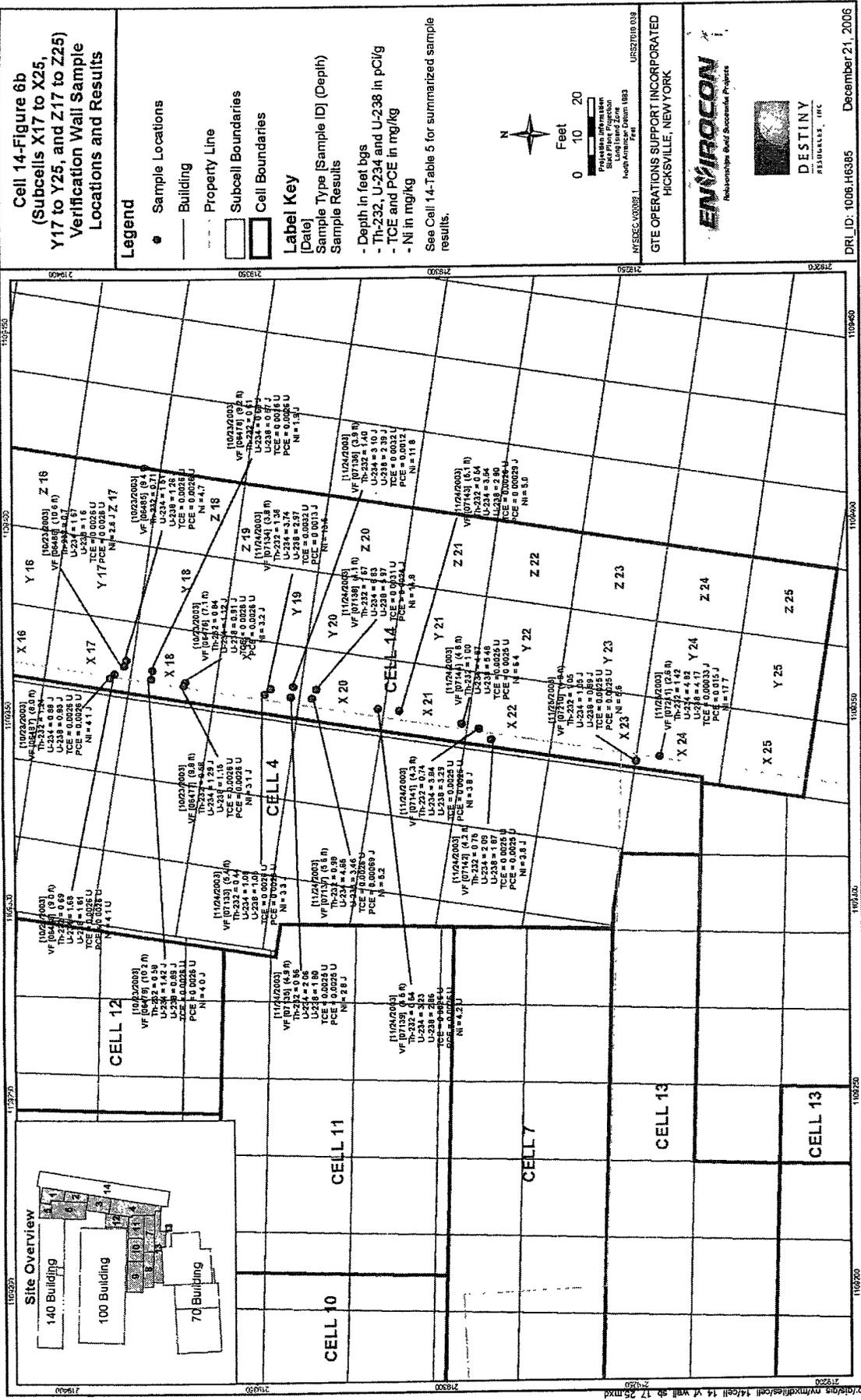
Scale: 0 10 20 Feet
 Projection Information: UTM Zone 18N
 North American Datum 1983
 NAD83 UTM Zone 18N
 LRS27010339

GTE OPERATIONS SUPPORT INCORPORATED
 HICKSVILLE, NEW YORK

ENVIROCON
 Relationship Build Successful Projects

DESTINY ASSOCIATES, INC.

DRJ ID: 1006 H6384 December 21, 2006



Cell 14-Figure 7a (Subcells X03 to X10) Systematic Soil Boring Locations and Results

Legend

- Boring Locations
- ▭ Building
- ▭ Property Line
- ▭ Subcell Boundaries
- ▭ Cell Boundaries

Label Key

[Date]
Sample Type [Sample ID] (Depth)
Sample Results

- Depth in feet bgs
- Th-232, U-234 and U-238 in pCi/g
- TCE and PCE in mg/kg
- Ni in mg/kg

See Cell 14-Table 6 for summarized sample results.

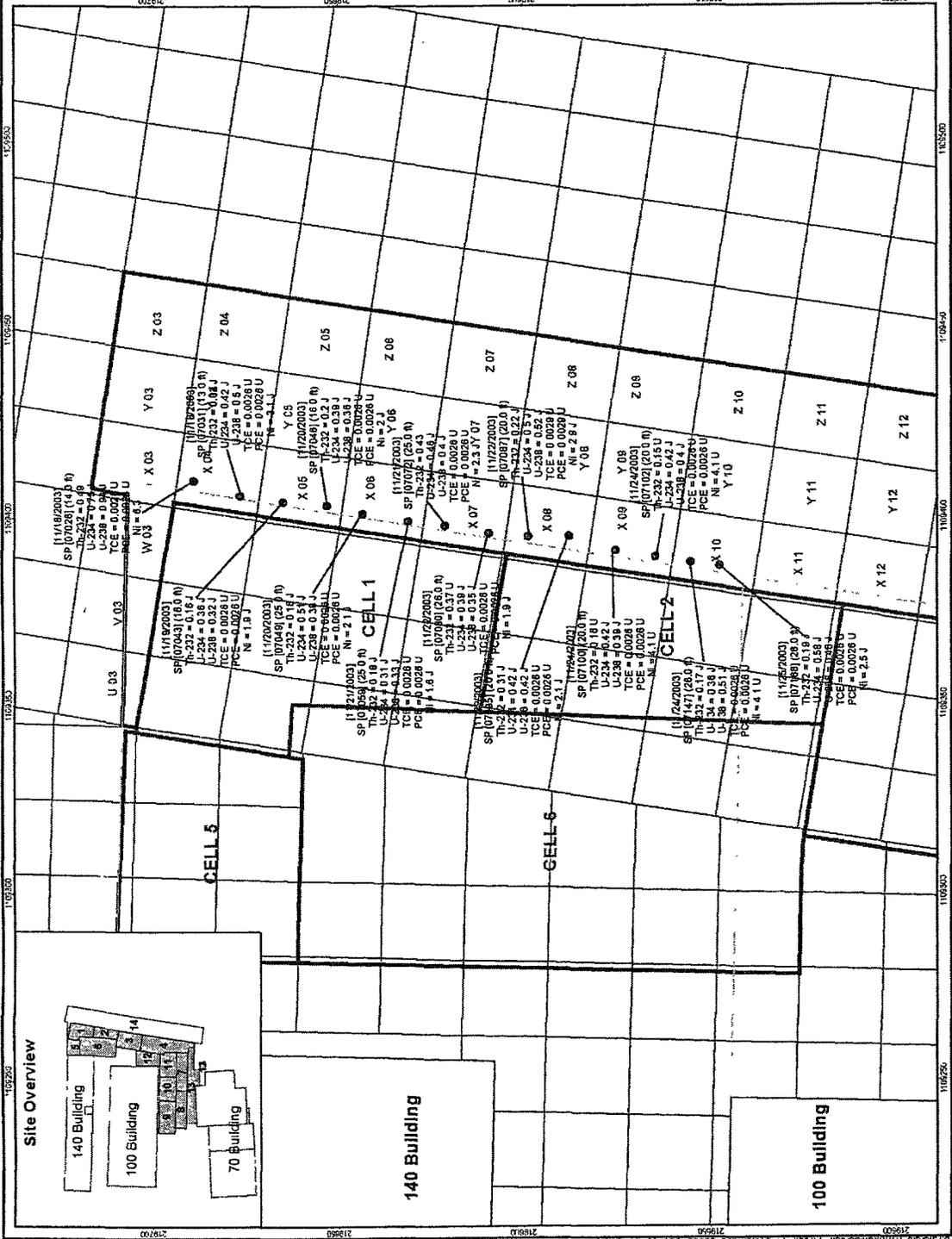


Feet
0 10 20

Professional Information
State of New York
North American Edition 1993
Page 1

LPSST0101038

GTE OPERATIONS SUPPORT INCORPORATED
HICKSVILLE, NEW YORK





"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

10/29/2003 04:18 PM

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: ProRadCon@aol.com, "Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>, "Robert Stewart"
<rstewar@gw.dec.state.ny.us>, "Thomas Papura"
<tpapura@gw.dec.state.ny.us>
Subject: Cell 14 (Subcells X03 to X10, Y03 to Y10, Z03 to Z10)

We have conducted our walkover survey and reviewed the confirmation sample data from the walls and floor of cell 14, Subcells X03 to X10, Y03 to Y10, Z03 to Z10 . We have reviewed the Severn Trent Lab gamma spec data of the cell 14 stockpile soil. We agree that these results are well below the cleanup criteria for uranium and thorium, and see no need for further remediation. Therefore, we have no objection to backfilling this cell. Once we have received your data package for this cell, we will send a formal response.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 1 of 3

GTES0003669



"Jerry Riggi"
<jmriggi@gw.dec.state
.ny.us>

11/05/2003 12:46 PM

To: Jean M. Agostinelli/EMPL/TX/Verizon@VZNotes
cc: ProRadCon@aol.com, billhoey@capecod.net, "Barbara Youngberg"
<bayoungb@gw.dec.state.ny.us>, "Robert Stewart"
<rrstewar@gw.dec.state.ny.us>, "Thomas Papura"
<tpapura@gw.dec.state.ny.us>
Subject: Cell 14 (Subcells X11 to X18, Y11 to Y18, Z11to Z18)

We have conducted our walkover survey and reviewed the confirmation sample data from the walls and floor of cell 14, Subcells X11 to X18, Y11 to Y18, Z11 to Z18 and subcells Y04 and Y05 where the stockpiled soil sat. We agree that these results are well below the cleanup criteria for uranium and thorium, and will await the results of the proposed augering to determine if further remediation is necessary. If remediation is deemed necessary, an additional walkover survey/sampling will be conducted.

Jerry Riggi
ERS-1, Radiation Section
NYSDEC

Attachment A
Page 2 of 3

GTES0003670

Bill Hoey

From: Jerry Riggi [jmrigger@gw.dec.state.ny.us]
Sent: Monday, January 31, 2005 10:06 AM
To: billhoey@capecod.net
Cc: ltabor@envirocon.com; Barbara Youngberg; jean.agostinelli@verizon.com
Subject: Cell 14, rows 19-25; Cell 1 North U03, V03, W03

This email will serve as documentation of the verbal approval to backfill Cell 14 rows 19-25 and Cell 1 North, U03, V03 and W03. Verbal approval was granted December 12, 2003 and May 19, 2004 respectively.

Jerry Riggi

Jerry M Riggi
NYSDEC
Bureau of Hazardous Waste and Radiation Management
(518) 402-8575
jmrigger@gw.dec.state.ny.us

Attachment A
Page 3 of 3

GTES0003671

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • FAX: (631) 444-0248
Website: www.dec.state.ny.us



January 5, 2004

Jean Agostinelli
GTE Operations Support, Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Surveys and Sampling Spagnoli Road Borrow Area and Spagnoli Road Stockpile located at JDP Yard, December 20, 2003
Former Sylvania Electric Products Facility, Site # V00089-1

Dear Ms. Agostinelli:

The Department has reviewed the December 20, 2003 report concerning the borrow soils from the Spagnoli Road area. Based on the data in this report, the Department finds these soils to be acceptable for use as backfill at the Former Sylvania Electric Products Facility site in Hicksville.

If you have any questions, please call me at (631) 444-0244.

Sincerely,



Robert R. Stewart
Environmental Engineer I
Environmental Engineer I

cc: W. Parish
J. Riggi

Attachment B
Page 1 of 2

GTES0003672

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • FAX: (631) 444-0248
Website: www.dec.state.ny.us



July 29, 2004

Jean Agostinelli
Vice President - Controller
GTE Operations Support Inc.
140 Cantiague Rock Road
Hicksville, NY 11801

Re: Borrow Soils Characterization Survey and Sampling: Supplemental Sampling at Spagnoli Road
(SPAG2), Melville, NY

Dear Ms. Agostinelli:

I have reviewed the subject report on the borrow soils proposed for use as backfill at the Former Sylvania Electric Product Facility site in Hicksville, site #V00089-1. Based on the sampling results presented in this report, I find the borrow soils at this location to be suitable for use as backfill at the site.

Sincerely,



Robert R. Stewart
Environmental Engineer I

cc via e-mail: W. Parish
J. Riggi

Attachment B
Page 2 of 2

GTES0003673

**Cell 14, Subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14
MARSSIM Evaluation Results
Using Severn Trent Laboratory, Inc. Sample Results**

The survey unit, Cell 14, subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14, passed the MARSSIM¹ Sign Test and the area is considered releasable. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 14, subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 127 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 127 samples are presented in the table on pages 3, 4 and 5 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for this survey unit (Attachment page 7), a minimum of 13 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 127 soil sample analyses.

Beginning on page 6 of this Attachment are three COMPASS reports. (See Section 10.1.1 details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 7 and 8 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 8) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3, 4 and 5 of this Attachment.

The third report is on pages 9 through 16 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3, 4 and 5. On the first page of this report (Attachment page 9) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 8 of the report (Attachment page 16) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.25. As is explained in Section 10.1.1, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 14, Subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14
Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05852	0.57	1.05 J	1.45 J
05864	0.53 J	0.45 J	0.57 J
05865	0.63	0.84 J	0.66 J
05866	0.34 J	0.65 J	0.81 J
05867	0.44	0.49 J	0.49 J
06826	0.45	0.50 J	0.48 J
06827	0.50	0.37 J	0.45 J
06828	0.46	0.60 J	0.45 J
06829	0.74	0.52 J	0.56 J
06051	0.77	0.73 J	0.64 J
06052	0.40 J	1.23	1.42
06053	0.70	0.75 J	0.68 J
06054	0.83	0.82 J	0.66 J
06041	0.65	0.73 J	0.80
06042	0.96	2.10	1.74
06043	0.25 J	0.67 J	0.40 J
06044	0.79	0.64 J	0.57 J
06178	0.79	0.85 J	0.95
06179	0.93	2.17	1.73
06177	0.22 J	0.98	1.10
06180	0.49	0.68 J	0.70
06173	0.86	0.83	0.83 J
06174	0.42	0.82	0.72 J
06175	0.94	0.54	0.57 J
06176	0.16 J	0.30 J	0.53 J
06193	1.22	0.61 J	0.89
06195	0.26 J	0.44 J	0.41 J
06198	1.31	0.95	0.74
06199	0.24 J	0.46 J	0.47 J
06747	0.16 J	0.58 J	0.43 J
06748	0.17 J	0.45 J	0.54 J
06749	0.26 J	0.64 J	0.32 J
06750	0.22 J	0.50 J	0.40 J
06787	0.29 U	0.32 J	0.19 J
06788	0.53	0.50 J	0.46 J
06789	0.28 J	0.34 J	0.34 J
06790	0.33 J	0.38 J	0.43 J
06774	0.31 J	0.60 J	0.36 J
06775	0.26 J	0.43 J	0.36 J
06776	0.61	0.43 J	0.33 J
06777	0.39 J	0.42 J	0.32 J
06629	0.16 J	0.52 J	0.43 J
06630	0.27 J	0.37 J	0.34 J
06631	0.31 J	0.61 J	0.48 J
06632	0.46	1.44	1.28
05888	1.24	3.05	3.01
05889	0.86	0.77 J	0.96
05857	1.14	1.74	1.62

Table C.1

Cell 14, Subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14
Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
15360	0.45	1.13	0.95
15365	0.90	1.37	1.25
15364	1.25	2.98	2.75
05840	0.79	1.37	1.21 J
05841	0.57	0.50	0.62 J
05842	0.59	1.92	1.25 J
05859	1.09	3.05	2.69
05860	0.30 J	0.57 J	0.33 J
05861	0.73	1.45	1.12
05862	0.83	0.90 J	0.76
06047	0.44	0.38 J	0.43 J
06048	0.67	0.68 J	0.74
06049	1.03	1.17	1.06
06050	0.71	0.97	0.72 J
06033	0.13 J	0.44 J	0.34 J
06034	0.45	0.34 J	0.37 J
06035	0.48	1.39	1.54
06036	0.38 J	1.33	1.55
06205	0.45	2.1	1.5
06206	0.7	0.47 J	0.76
06207	0.38 J	0.85	0.79
06208	0.49	1.82	1.79
06226	0.67	1.45 J	1.56
06227	0.45	0.44 J	0.53 J
06228	0.15 J	6.08	5.7
06229	0.45	0.36 J	0.53 J
06236	0.57	1.86 J	2.01
06237	0.36 J	0.33 J	0.42 J
06239	0.58	1.81 J	1.81
06240	0.35	4.05	4.32
06754	0.20 J	0.55 J	0.67 J
06755	0.85	3.45	3.20
06756	0.29 U	0.86 J	0.98 J
06757	0.4 U	3.47	3.49
06797	0.42	0.43 J	0.47 J
06798	0.58	0.38 J	0.37 J
06799	0.16 J	0.26 J	0.27 J
06800	0.18 J	0.41 J	0.44 J
06783	0.42	0.51 J	0.51 J
06784	0.53	0.51 J	0.56 J
06785	0.21 J	0.28 J	0.23 J
06786	0.44	4.04	3.75
06623	0.77	0.40 J	0.47 J
06624	0.18 J	0.35 J	0.31 J
06625	0.16 J	0.40 J	0.46 J
06627	0.42	0.68	0.95
05848	0.85	0.83	0.80 J
05851	0.56	0.76	0.48 J

Table C.1

Cell 14, Subcells U03, V03, W03, X03 to X14, Y03 to Y14, and Z03 to Z14
Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Tl-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05858	0.83	0.89	0.77 J
06020	0.87	4.14	4.19
06021	1.02	2.67	2.04
06830	0.59	0.77	0.44 J
06022	0.79	3.25	3.13
06023	1.18	5.09	5.35
06024	0.44	0.85	0.84
06027	0.90	3.75	3.63
06028	0.54	0.87	0.96
06029	0.81	1.40	1.40
06184	0.50	1.11 J	1.15 J
06185	0.74	2.03	1.79
06186	0.59	1.08	1.20
06181	1.19	2.51	2.55
06182	0.71	1.94	1.60
06183	0.77	0.93	0.99
06189	0.88	0.93	1.11
06190	0.70	2.02	2.36
06191	0.33 J	0.35 J	0.21 J
06744	0.63	2.36	2.44
06745	0.46	1.96	2.13
06746	0.38 J	0.55 J	0.56 J
06791	0.80	1.62	1.55
06792	0.39 J	0.51 J	0.44 J
06793	0.52	0.54 J	0.59 J
06780	0.46	2.25	2.12
06781	0.96	2.80	2.86
06782	0.37 J	0.42 J	0.67
06634	0.78	2.39	2.44
06635	0.54	0.68 J	0.64 J
06637	0.56	1.08	0.56 J

Notes:

Cell area = 1521 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLW units are pCi/g.
Building surface DCGLW units are dpm/100 cm².

Contaminant	Type	DCGLW	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

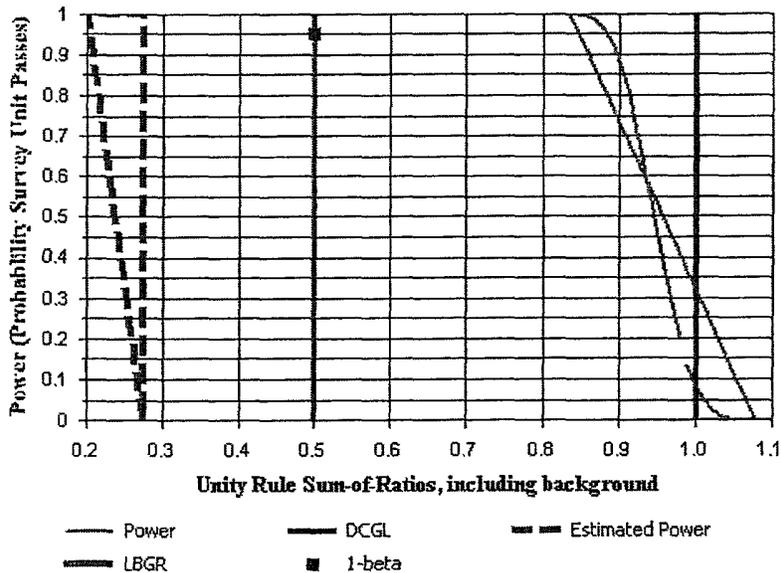


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 14 U03, V03, W03, XYZ 03-14 with STL data		
Comments:			
Area (m ²):	1,521	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.11
DCGL (SOR):	1	Sample Size (N):	13
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.27
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	13
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLW (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLW (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	0.6 \pm 0.3	N/A
U-234	1.5 \pm 1.3	N/A
U-238	1.5 \pm 1.3	N/A

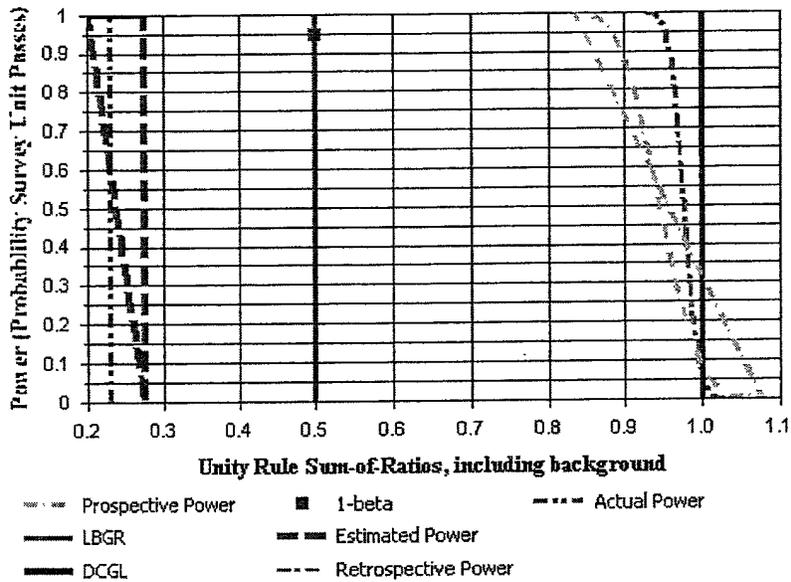


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 14 U03, V03, W03, XYZ 03-14 with STL data
Report Number: 1
Survey Unit Samples: 127
Reference Area Samples: 0
Test Performed: Sign Test Result: Not Performed
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
15360	S	0.45	1.13	0.95
15365	S	0.9	1.37	1.25
15364	S	1.25	2.98	2.75
05840	S	0.79	1.37	1.21
05841	S	0.57	0.5	0.62
05842	S	0.59	1.92	1.25
05859	S	1.09	3.05	2.69
05860	S	0.3	0.57	0.33
05861	S	0.73	1.45	1.12
05862	S	0.83	0.9	0.76
06047	S	0.44	0.38	0.43
06048	S	0.67	0.68	0.74
06049	S	1.03	1.17	1.06
06050	S	0.71	0.97	0.72
06033	S	0.13	0.44	0.34
06034	S	0.45	0.34	0.37
06035	S	0.48	1.39	1.54
06036	S	0.38	1.33	1.55
06205	S	0.45	2.1	1.5
06206	S	0.7	0.47	0.76
06207	S	0.38	0.85	0.79
06208	S	0.49	1.82	1.79
06226	S	0.67	1.45	1.56
06227	S	0.45	0.44	0.53
06228	S	0.15	6.08	5.7
06229	S	0.45	0.36	0.53
06236	S	0.57	1.86	2.01
06237	S	0.36	0.33	0.42
06239	S	0.58	1.81	1.81
06240	S	0.35	4.05	4.32
06754	S	0.2	0.55	0.67
06755	S	0.85	3.45	3.2
06756	S	0.29	0.86	0.98
06757	S	0.4	3.47	3.49
06797	S	0.42	0.43	0.47
06798	S	0.58	0.38	0.37
06799	S	0.16	0.26	0.27
06800	S	0.18	0.41	0.44
06783	S	0.42	0.51	0.51
06784	S	0.53	0.51	0.56
06785	S	0.21	0.28	0.23
06786	S	0.44	4.04	3.75
06623	S	0.77	0.4	0.47
06624	S	0.18	0.35	0.31
06625	S	0.16	0.4	0.46
06627	S	0.42	0.68	0.95
05848	S	0.85	0.83	0.8
05851	S	0.56	0.76	0.48
05852	S	0.57	1.05	1.45
05864	S	0.53	0.45	0.57
05865	S	0.63	0.84	0.66



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
05866	S	0.34	0.65	0.81
05867	S	0.44	0.49	0.49
06826	S	0.45	0.5	0.48
06827	S	0.5	0.37	0.45
06828	S	0.46	0.6	0.45
06829	S	0.74	0.52	0.56
06051	S	0.77	0.73	0.64
06052	S	0.4	1.23	1.42
06053	S	0.7	0.75	0.68
06054	S	0.83	0.82	0.66
06041	S	0.65	0.73	0.8
06042	S	0.96	2.1	1.74
06043	S	0.25	0.67	0.4
06044	S	0.79	0.64	0.57
06178	S	0.79	0.85	0.95
06179	S	0.93	2.17	1.73
06177	S	0.22	0.98	1.1
06180	S	0.49	0.68	0.7
06173	S	0.86	0.83	0.83
06174	S	0.42	0.82	0.72
06175	S	0.94	0.54	0.57
06176	S	0.16	0.3	0.53
06193	S	1.22	0.61	0.89
06195	S	0.26	0.44	0.41
06198	S	1.31	0.95	0.74
06199	S	0.24	0.46	0.47
06747	S	0.16	0.58	0.43
06748	S	0.17	0.45	0.54
06749	S	0.26	0.64	0.32
06750	S	0.22	0.5	0.4
06787	S	0.29	0.32	0.19
06788	S	0.53	0.5	0.46
06789	S	0.28	0.34	0.34
06790	S	0.33	0.38	0.43
06774	S	0.31	0.6	0.36
06775	S	0.26	0.43	0.36
06776	S	0.61	0.43	0.33
06777	S	0.39	0.42	0.32
06629	S	0.16	0.52	0.43
06630	S	0.27	0.37	0.34
06631	S	0.31	0.61	0.48
06632	S	0.46	1.44	1.28
05888	S	1.24	3.05	3.01
05889	S	0.86	0.77	0.96
05857	S	1.14	1.74	1.62
05858	S	0.83	0.89	0.77
06020	S	0.87	4.14	4.19
06021	S	1.02	2.67	2.04
06830	S	0.59	0.77	0.44
06022	S	0.79	3.25	3.13
06023	S	1.18	5.09	5.35



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06024	S	0.44	0.85	0.84
06027	S	0.9	3.75	3.63
06028	S	0.54	0.87	0.96
06029	S	0.81	1.4	1.4
06184	S	0.5	1.11	1.15
06185	S	0.74	2.03	1.79
06186	S	0.59	1.08	1.2
06181	S	1.19	2.51	2.55
06182	S	0.71	1.94	1.6
06183	S	0.77	0.93	0.99
06189	S	0.88	0.93	1.11
06190	S	0.7	2.02	2.36
06191	S	0.33	0.35	0.21
06744	S	0.63	2.36	2.44
06745	S	0.46	1.96	2.13
06746	S	0.38	0.55	0.56
06791	S	0.8	1.62	1.55
06792	S	0.39	0.51	0.44
06793	S	0.52	0.54	0.59
06780	S	0.46	2.25	2.12
06781	S	0.96	2.8	2.86
06782	S	0.37	0.42	0.67
06634	S	0.78	2.39	2.44
06635	S	0.54	0.68	0.64
06637	S	0.56	1.08	0.56

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
15360	S	0.2
15365	S	0.37
15364	S	0.56
05840	S	0.33
05841	S	0.23
05842	S	0.27
05859	S	0.5
05860	S	0.13
05861	S	0.31
05862	S	0.33
06047	S	0.17
06048	S	0.27
06049	S	0.41
06050	S	0.29
06033	S	0.06



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
06034	S	0.17
06035	S	0.23
06036	S	0.19
06205	S	0.23
06206	S	0.27
06207	S	0.17
06208	S	0.25
06226	S	0.3
06227	S	0.18
06228	S	0.29
06229	S	0.18
06236	S	0.28
06237	S	0.14
06239	S	0.28
06240	S	0.29
06754	S	0.1
06755	S	0.44
06756	S	0.14
06757	S	0.28
06797	S	0.17
06798	S	0.22
06799	S	0.07
06800	S	0.08
06783	S	0.17
06784	S	0.21
06785	S	0.09
06786	S	0.31
06623	S	0.29
06624	S	0.08
06625	S	0.07
06627	S	0.18
05848	S	0.34
05851	S	0.22
05852	S	0.25
05864	S	0.21
05865	S	0.26
05866	S	0.15
05867	S	0.18
06826	S	0.18
06827	S	0.19
06828	S	0.19
06829	S	0.29
06051	S	0.3
06052	S	0.2
06053	S	0.28
06054	S	0.33
06041	S	0.26
06042	S	0.42
06043	S	0.11
06044	S	0.31
06178	S	0.32



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
06179	S	0.41
06177	S	0.12
06180	S	0.2
06173	S	0.34
06174	S	0.18
06175	S	0.36
06176	S	0.07
06193	S	0.47
06195	S	0.11
06198	S	0.5
06199	S	0.1
06747	S	0.08
06748	S	0.08
06749	S	0.11
06750	S	0.1
06787	S	0.11
06788	S	0.21
06789	S	0.11
06790	S	0.13
06774	S	0.13
06775	S	0.11
06776	S	0.23
06777	S	0.15
06629	S	0.08
06630	S	0.11
06631	S	0.13
06632	S	0.22
05888	S	0.56
05889	S	0.34
05857	S	0.47
05858	S	0.33
06020	S	0.48
06021	S	0.46
06830	S	0.23
06022	S	0.41
06023	S	0.63
06024	S	0.19
06027	S	0.47
06028	S	0.23
06029	S	0.35
06184	S	0.22
06185	S	0.34
06186	S	0.26
06181	S	0.53
06182	S	0.32
06183	S	0.31
06189	S	0.36
06190	S	0.34
06191	S	0.13
06744	S	0.32
06745	S	0.25



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
06746	S	0.16
06791	S	0.35
06792	S	0.16
06793	S	0.21
06780	S	0.25
06781	S	0.46
06782	S	0.15
06634	S	0.38
06635	S	0.22
06637	S	0.23



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	127	N/A	N=13
Mean (SOR)	0.25	N/A	0.27
Median (SOR)	0.23	N/A	N/A
Std Dev (SOR)	0.12	N/A	0.11
High Value (SOR)	0.63	N/A	N/A
Low Value (SOR)	0.06	N/A	N/A

Cell 14, Subcells X15 to X25, Y15 to Y25, and Z15 to Z25
MARSSIM Evaluation Results
Using Severn Trent Laboratory, Inc. Sample Results

The survey unit, Cell 14, subcells X15 to X25, Y15 to Y25, and Z15 to Z25, passed the MARSSIM¹ Sign Test and the area is considered releasable. The MARSSIM protocol uses a non-parametric statistical analysis test that evaluates the whole data set (all of the VF floor sample results). See Section 8.0 for additional details on the MARSSIM protocol.

This evaluation of Cell 14, subcells X15 to X25, Y15 to Y25, and Z15 to Z25 was performed using the floor VF sample results and the non-parametric statistical analysis protocols described in the MARSSIM. There were a total of 120 floor VF samples collected and analyzed for radiological contaminants for purposes of this evaluation. The samples were collected using the standard ABCD pattern except as noted in the main text of this cell status report. The sample results for each of the 120 samples are presented in the table on pages 3, 4 and 5 of this Attachment and are the results reported by STL.

The charts on the subsequent pages of this appendix were generated by the COMPASS² computer code. As shown on the first page of the COMPASS Surface Soil Survey Plan for this survey unit (Attachment page 7), a minimum of 14 soil sample analyses are sufficient for the MARSSIM-based analysis to be statistically significant. This MARSSIM-based analysis for this cell is based on 120 soil sample analyses.

Beginning on page 6 of this Attachment are three COMPASS reports. (See Section 10.1.1 details concerning the use of the COMPASS code and the information presented in the reports.) The first report is titled *Site Report* and provides information related to the radiological contaminants and their respective DCGL_w³ (the Site cleanup level) to be used in the evaluation.

The second report is on pages 7 and 8 and is titled *Surface Soil Survey Plan*. This report contains information that is used in the planning phase of the survey or soil sample collection. This information is based on the Site's cleanup levels and cell parameters or is information that is derived from these parameters. The last section of the second page of this report (Attachment page 8) contains information that, by design, is an estimate of the average concentration and the standard deviation anticipated to be present in the survey unit for each radionuclide. The values in this report are based on the actual average

¹ NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), August 2000.

² COMPASS Code Version 1.0.0 was developed under the sponsorship of the U. S. Nuclear Regulatory Commission for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR Part 20, Subpart E).

³ For these purposes, the term DCGL is synonymous with the term cleanup level.

concentration and standard deviation of each radionuclide as calculated from the sample results on pages 3, 4 and 5 of this Attachment.

The third report is on pages 9 through 17 and is titled *DQA Surface Soil Report*. This report presents the results of performing a non-parametrical statistical analysis called the Sign Test on the samples results listed on pages 3, 4 and 5. On the first page of this report (Attachment page 9) is given the *Assessment Conclusion* which is *Reject Null Hypothesis (Survey Unit PASSES)*. The only other possible conclusion is if the survey unit did not pass. Other information presented in the report is either input information that is echoed back in the report or is information related to the performance of the Sign Test. On page 7 of the report (Attachment page 15) is a table titled *Basic Statistical Quantities Summary*. It is shown in this table that the average or mean SOR is 0.41. As is explained in Section 10.1.1, this SOR value is high by approximately a factor of 2. The information in this table supports the earlier stated conclusion as it demonstrates that the average concentration of radiological contaminants is significantly below the cleanup levels.

Table C.1

Cell 14, Subcells X15 to X25, Y15 to Y25 and Z15 to Z25

Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06575	0.26 U	0.61 J	0.56 J
06576	0.43 U	0.42 J	0.29 J
06577	0.26 J	0.59 J	0.59 J
06578	0.17 U	0.33 J	0.61 J
06528	0.32 U	0.62 J	0.56 J
06529	0.31 U	0.47 J	0.46 J
06530	0.25 J	0.42 J	0.39 J
06531	0.23 J	0.4 J	0.35 J
06481	0.28 J	0.97 J	1.17
06482	0.14 U	0.33 J	0.58 J
06483	0.86	0.74 J	0.77 J
06484	1.73	1.58	1.67
06473	0.46	1.72	1.44
06474	0.98	1.48 J	1.21
07104	0.57	0.54 J	0.57 J
06475	1.13	2.13	2.08
07105	1.27	1.95	2.05
07106	1.48	9.24	9.60
07107	0.91	8.18	7.09
07108	0.57	0.79	0.87
07109	0.97	4.59	4.85
07110	1.29	1.46	1.20
07111	1.34	3.41	2.70
07112	0.62	1.33	1.11
07113	0.82	3.96	4.30
07114	0.98	5.72	5.50
07115	1.54	10.0	11.4
07116	0.22 J	0.84	0.73
07117	1.46	2.04	2.19
07118	1.27	4.92	4.79
07119	1.40	2.92	2.68
07120	1.06	5.78	5.29
07204	1.16	2.95	3.32
07205	0.63	0.78 J	0.78 J
07206	0.37 J	0.92 J	0.88 J
07207	0.62	0.92 J	0.91 J
07197	1.1	3.83	4.01
07198	1.14	4.73	4.67
07199	1.03	3.55	3.51
07280	1.27	6.97	7.04
07194	1.46	2.26	2.25
07195	1.28	1.25	1.39
07196	1.28	1.28	1.48
06571	0.77	0.73 J	0.59 J
06572	0.24 J	0.81 J	0.57 J
06573	0.57	0.64 J	0.4 J
06574	0.29 J	0.33 J	0.37 J
06532	0.25 J	0.6 J	0.33 J

Table C.1

Cell 14, Subcells X15 to X25, Y15 to Y25 and Z15 to Z25
Soil Samples Used for MARSSIM Evaluation Using STL Sample Results

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06533	0.45	1.77	1.44
06534	0.16 J	0.5 J	0.51 J
06535	0.17 J	0.42 J	0.48 J
06469	0.28 J	0.71 J	0.57 J
06470	0.51	0.44 J	0.63 J
06471	0.97	0.97 J	0.57 J
06472	1.17	0.96 J	0.85 J
06460	0.4	0.32 J	0.41 J
06461	0.39 J	0.51 J	0.56 J
07103	0.56	0.86	0.57 J
06462	0.66	0.96 J	0.96 J
07121	0.59	1.63	1.56
07122	1.25	4.22	4.33
07123	0.37 J	0.38 J	0.50
07124	0.82	0.70 J	0.68
07125	0.64	0.63 J	0.69
07126	1.10	3.46	3.83
07127	0.85	0.55 J	0.57 J
07128	1.12	1.38	1.33
07129	0.87	0.77 J	1.06
07130	1.36	5.55	6.00
07131	0.94	1.12	0.89
07132	0.90	2.07	1.64
07169	0.79	0.96	1.18
07170	0.82	0.53 J	0.58 J
07171	0.72	0.63 J	0.75 J
07172	0.85 J	3.65	3.32
07173	0.28 U	0.62 J	0.43 J
07174	0.36 U	0.53 J	0.63 J
07175	1.01	0.95	0.93 J
07176	0.40 J	1.01	0.87 J
07187	1.30	2.37	2.62
07188	1.25	4.42	4.51
07189	1.39	1.69	1.68
07190	0.72	6.71	6.23
07200	0.69	0.85 J	0.81 J
07201	1.3	0.76 J	0.95 J
07202	0.82	1.05 J	0.88 J
07203	1.6	1.22 J	0.84 J
06568	0.67	1.49	1.43
06569	0.94	2.08	1.99
06570	0.29 U	0.48 J	0.37 J
06536	0.58	2.12	2.13
06537	0.57	1.23	1.26
06538	0.45	0.51 J	0.4 J
06466	0.31 J	0.52 J	0.54 J
06467	0.52	1.21 J	1.02 J
06468	0.48	0.83 J	0.71 J

Table C.1

**Cell 14, Subcells X15 to X25, Y15 to Y25 and Z15 to Z25
Soil Samples Used for MARSSIM Evaluation Using STL Sample Results**

Sample ID No.	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06457	0.69	0.92 J	0.96 J
06458	1.32	7.59	7.88
06459	0.4	0.38 J	0.54 J
07149	1.51	5.09	5.22
07150	1.46	4.04 J	3.98 J
07151	1.04	6.53	6.31
07153	1.05	4.08	4.05
07154	0.97	9.05 J	8.11 J
07155	1.41	4.82	4.72
07156	1.60	7.89	8.27
07157	1.76	12.8	12.6
07158	1.72	8.74	8.50
07178	1.13	0.96	0.74 J
07179	0.76	1.03	0.80 J
07180	1.24 J	1.06	0.89 J
07181	0.59 J	0.55 J	0.44 J
07182	0.96 J	1.47	1.40
07183	2.34 J	0.57 J	0.77 J
07184	1.41	8.54	8.12
07185	1.22	5.82	5.83
07186	1.08	6.92	6.62
07191	1.04	4.97	4.78
07192	1.37	5.08	3.91
07193	1.06	4.4	4.56

Notes:

Cell area = 1380 sq. meters

For a sample result reported as <MDA, the MDA is used as the sample result for purposes of this evaluation.

Qualifiers:

J - Validation qualifier used to indicate that the associated value is considered an estimate.

U - Validation qualifier used to indicate that the result is less than the MDA. The value listed is the MDA.



Site Report

Site Summary

Site Name: GTEOSI, Hicksville Site
Planner(s): William R. Hoey

Contaminant Summary

NOTE: Surface soil DCGLw units are pCi/g.
Building surface DCGLw units are dpm/100 cm².

Contaminant	Type	DCGLw	Screening Value Used?	Area (m ²)	Area Factor
Th-232	Surface Soil	2.80	No	1	12.3
				3	6.08
				10	3.12
				30	2.24
				100	1.75
				300	1.47
				1,000	1.05
				3,000	1.03
				10,000	1
U-234	Surface Soil	50.00	No	10,000	1
				3,000	1.01
				1,000	1.04
				300	1.43
				100	2.27
				30	5.73
				10	11.1
				3	18.3
				1	30.5
U-238	Surface Soil	50.00	No	1	30.5
				3	18.3
				10	11.1
				30	5.73
				100	2.27
				300	1.43
				1,000	1.04
				3,000	1.01
				10,000	1

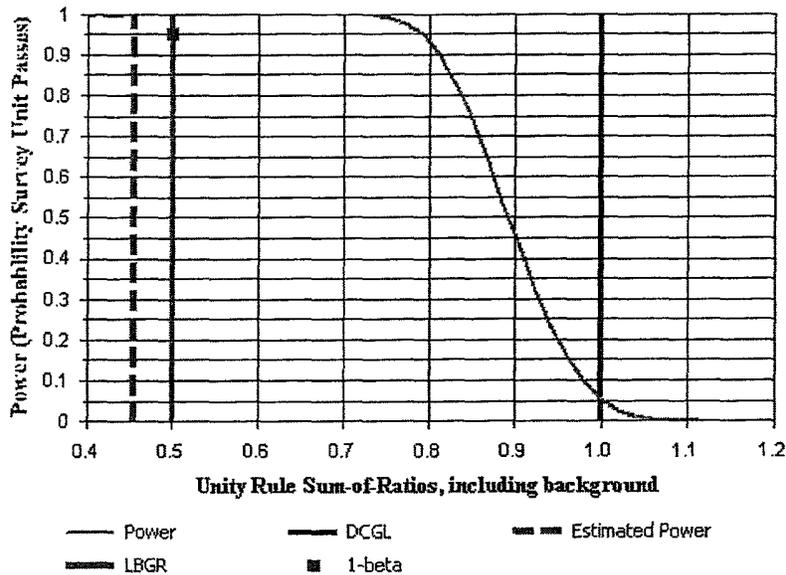


Surface Soil Survey Plan

Survey Plan Summary

Site:	GTEOSI, Hicksville Site		
Planner(s):	William R. Hoey		
Survey Unit Name:	Cell 14 X15-25, Y15-25 and Z15-24 with STL data		
Comments:			
Area (m ²):	1,380	Classification:	1
Selected Test:	Sign	Estimated Sigma (SOR):	0.19
DCGL (SOR):	1	Sample Size (N):	14
LBGR (SOR):	0.5	Estimated Conc. (SOR):	0.46
Alpha:	0.050	Estimated Power:	1
Beta:	0.050	EMC Sample Size (N):	14
Scanning Instrumentation:	3" x 3" NaI collimated		

Prospective Power Curve





Surface Soil Survey Plan

Contaminant Summary

Contaminant	DCGLw (pCi/g)	Inferred Contaminant	Ratio	Modified DCGLw (pCi/g)	Scan MDC (pCi/g)
Th-232	2.80	N/A	N/A	N/A	1.8
U-234	50.00	N/A	N/A	N/A	107
U-238	50.00	N/A	N/A	N/A	80

Contaminant	Survey Unit Estimate (Mean \pm 1-Sigma) (pCi/g)	Reference Area Estimate (Mean \pm 1-Sigma) (pCi/g)
Th-232	1 \pm 0.5	N/A
U-234	2.4 \pm 2.7	N/A
U-238	2.5 \pm 2.7	N/A

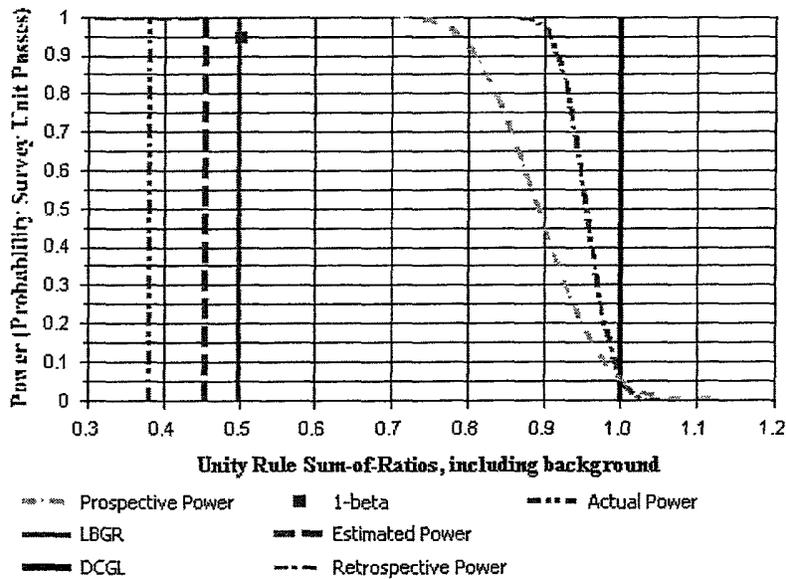


DQA Surface Soil Report

Assessment Summary

Site: GTEOSI, Hicksville Site
Planner(s): William R. Hoey
Survey Unit Name: Cell 14 X15-25, Y15-25 and Z15-24 with STL data
Report Number: 1
Survey Unit Samples: 120
Reference Area Samples: 0
Test Performed: Sign Test Result: Pass
Judgmental Samples: 0 EMC Result: Not Performed
Assessment Conclusion: **Reject Null Hypothesis (Survey Unit PASSES)**

Retrospective Power Curve





DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06575	S	0.26	0.61	0.56
06576	S	0.43	0.42	0.29
06577	S	0.26	0.59	0.59
06578	S	0.17	0.33	0.61
06528	S	0.32	0.62	0.56
06529	S	0.31	0.47	0.46
06530	S	0.25	0.42	0.39
06531	S	0.23	0.4	0.35
06481	S	0.28	0.97	1.17
06482	S	0.14	0.33	0.58
06483	S	0.86	0.74	0.77
06484	S	1.73	1.58	1.67
06473	S	0.46	1.72	1.44
06474	S	0.98	1.48	1.21
07104	S	0.57	0.54	0.57
06475	S	1.13	2.13	2.08
07105	S	1.27	1.95	2.05
07106	S	1.48	9.24	9.6
07107	S	0.91	8.18	7.09
07108	S	0.57	0.79	0.87
07109	S	0.97	4.59	4.85
07110	S	1.29	1.46	1.2
07111	S	1.34	3.41	2.7
07112	S	0.62	1.33	1.11
07113	S	0.82	3.96	4.3
07114	S	0.98	5.72	5.5
07115	S	1.54	10	11.4
07116	S	0.22	0.84	0.73
07117	S	1.46	2.04	2.19
07118	S	1.27	4.92	4.79
07119	S	1.4	2.92	2.68
07120	S	1.06	5.78	5.29
07204	S	1.16	2.95	3.32
07205	S	0.63	0.78	0.78
07206	S	0.37	0.92	0.88
07207	S	0.62	0.92	0.91
07197	S	1.1	3.83	4.01
07198	S	1.14	4.73	4.67
07199	S	1.03	3.55	3.51
07280	S	1.27	6.97	7.04
07194	S	1.46	2.26	2.25
07195	S	1.28	1.25	1.39
07196	S	1.28	1.28	1.48
06571	S	0.77	0.73	0.59
06572	S	0.24	0.81	0.57
06573	S	0.57	0.64	0.4
06574	S	0.29	0.33	0.37
06532	S	0.25	0.6	0.33
06533	S	0.45	1.77	1.44
06534	S	0.16	0.5	0.51
06535	S	0.17	0.42	0.48



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
06469	S	0.28	0.71	0.57
06470	S	0.51	0.44	0.63
06471	S	0.97	0.97	0.57
06472	S	1.17	0.96	0.85
06460	S	0.4	0.32	0.41
06461	S	0.39	0.51	0.56
07103	S	0.56	0.86	0.57
06462	S	0.66	0.96	0.96
07121	S	0.59	1.63	1.56
07122	S	1.25	4.22	4.33
07123	S	0.37	0.38	0.5
07124	S	0.82	0.7	0.68
07125	S	0.64	0.63	0.69
07126	S	1.1	3.46	3.83
07127	S	0.85	0.55	0.57
07128	S	1.12	1.38	1.33
07129	S	0.87	0.77	1.06
07130	S	1.36	5.55	6
07131	S	0.94	1.12	0.89
07132	S	0.9	2.07	1.64
07169	S	0.79	0.96	1.18
07170	S	0.82	0.53	0.58
07171	S	0.72	0.63	0.75
07172	S	0.85	3.65	3.32
07173	S	0.28	0.62	0.43
07174	S	0.36	0.53	0.63
07175	S	1.01	0.95	0.93
07176	S	0.4	1.01	0.87
07187	S	1.3	2.37	2.62
07188	S	1.25	4.42	4.51
07189	S	1.39	1.69	1.68
07190	S	0.72	6.71	6.23
07200	S	0.69	0.85	0.81
07201	S	1.3	0.76	0.95
07202	S	0.82	1.05	0.88
07203	S	1.6	1.22	0.84
06568	S	0.67	1.49	1.43
06569	S	0.94	2.08	1.99
06570	S	0.29	0.48	0.37
06536	S	0.58	2.12	2.13
06537	S	0.57	1.23	1.26
06538	S	0.45	0.51	0.4
06466	S	0.31	0.52	0.54
06467	S	0.52	1.21	1.02
06468	S	0.48	0.83	0.71
06457	S	0.69	0.92	0.96
06458	S	1.32	7.59	7.88
06459	S	0.4	0.38	0.54
07149	S	1.51	5.09	5.22
07150	S	1.46	4.04	3.98
07151	S	1.04	6.53	6.31



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Th-232 (pCi/g)	U-234 (pCi/g)	U-238 (pCi/g)
07153	S	1.05	4.08	4.05
07154	S	0.97	9.05	8.11
07155	S	1.41	4.82	4.72
07156	S	1.6	7.89	8.27
07157	S	1.76	12.8	12.6
07158	S	1.72	8.74	8.5
07178	S	1.13	0.96	0.74
07179	S	0.76	1.03	0.8
07180	S	1.24	1.06	0.89
07181	S	0.59	0.55	0.44
07182	S	0.96	1.47	1.4
07183	S	2.34	0.57	0.77
07184	S	1.41	8.54	8.12
07185	S	1.22	5.82	5.83
07186	S	1.08	6.92	6.62
07191	S	1.04	4.97	4.78
07192	S	1.37	5.08	3.91
07193	S	1.06	4.4	4.56

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
06575	S	0.12
06576	S	0.17
06577	S	0.12
06578	S	0.08
06528	S	0.14
06529	S	0.13
06530	S	0.11
06531	S	0.1
06481	S	0.14
06482	S	0.07
06483	S	0.34
06484	S	0.68
06473	S	0.23
06474	S	0.4
07104	S	0.23
06475	S	0.49
07105	S	0.53
07106	S	0.91
07107	S	0.63
07108	S	0.24
07109	S	0.54
07110	S	0.51



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
07111	S	0.6
07112	S	0.27
07113	S	0.46
07114	S	0.57
07115	S	0.98
07116	S	0.11
07117	S	0.61
07118	S	0.65
07119	S	0.61
07120	S	0.6
07204	S	0.54
07205	S	0.26
07206	S	0.17
07207	S	0.26
07197	S	0.55
07198	S	0.6
07199	S	0.51
07280	S	0.73
07194	S	0.61
07195	S	0.51
07196	S	0.51
06571	S	0.3
06572	S	0.11
06573	S	0.22
06574	S	0.12
06532	S	0.11
06533	S	0.22
06534	S	0.08
06535	S	0.08
06469	S	0.13
06470	S	0.2
06471	S	0.38
06472	S	0.45
06460	S	0.16
06461	S	0.16
07103	S	0.23
06462	S	0.27
07121	S	0.27
07122	S	0.62
07123	S	0.15
07124	S	0.32
07125	S	0.25
07126	S	0.54
07127	S	0.33
07128	S	0.45
07129	S	0.35
07130	S	0.72
07131	S	0.38
07132	S	0.4
07169	S	0.32
07170	S	0.32



DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
07171	S	0.28
07172	S	0.44
07173	S	0.12
07174	S	0.15
07175	S	0.4
07176	S	0.18
07187	S	0.56
07188	S	0.63
07189	S	0.56
07190	S	0.52
07200	S	0.28
07201	S	0.5
07202	S	0.33
07203	S	0.61
06568	S	0.3
06569	S	0.42
06570	S	0.12
06536	S	0.29
06537	S	0.25
06538	S	0.18
06466	S	0.13
06467	S	0.23
06468	S	0.2
06457	S	0.28
06458	S	0.78
06459	S	0.16
07149	S	0.75
07150	S	0.68
07151	S	0.63
07153	S	0.54
07154	S	0.69
07155	S	0.69
07156	S	0.89
07157	S	1.14
07158	S	0.96
07178	S	0.44
07179	S	0.31
07180	S	0.48
07181	S	0.23
07182	S	0.4
07183	S	0.86
07184	S	0.84
07185	S	0.67
07186	S	0.66
07191	S	0.57
07192	S	0.67
07193	S	0.56



DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	120	N/A	N=14
Mean (SOR)	0.41	N/A	0.46
Median (SOR)	0.38	N/A	N/A
Std Dev (SOR)	0.24	N/A	0.19
High Value (SOR)	1.14	N/A	N/A
Low Value (SOR)	0.07	N/A	N/A

Statistical Test Summary

S+: 119
 Critical Value: 69
 Result: Pass

Data	DCGLw - Data	Sign
0.12	0.88	+
0.17	0.83	+
0.12	0.88	+
0.08	0.92	+
0.14	0.86	+
0.13	0.87	+
0.11	0.89	+
0.1	0.90	+
0.14	0.86	+
0.07	0.93	+
0.34	0.66	+
0.68	0.32	+
0.23	0.77	+
0.4	0.60	+
0.23	0.77	+
0.49	0.51	+
0.53	0.47	+
0.91	0.09	+
0.63	0.37	+
0.24	0.76	+
0.54	0.46	+
0.51	0.49	+
0.6	0.40	+
0.27	0.73	+
0.46	0.54	+
0.57	0.43	+
0.98	0.02	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.11	0.89	+
0.61	0.39	+
0.65	0.35	+
0.61	0.39	+
0.6	0.40	+
0.54	0.46	+
0.26	0.74	+
0.17	0.83	+
0.26	0.74	+
0.55	0.45	+
0.6	0.40	+
0.51	0.49	+
0.73	0.27	+
0.61	0.39	+
0.51	0.49	+
0.51	0.49	+
0.3	0.70	+
0.11	0.89	+
0.22	0.78	+
0.12	0.88	+
0.11	0.89	+
0.22	0.78	+
0.08	0.92	+
0.08	0.92	+
0.13	0.87	+
0.2	0.80	+
0.38	0.62	+
0.45	0.55	+
0.16	0.84	+
0.16	0.84	+
0.23	0.77	+
0.27	0.73	+
0.27	0.73	+
0.62	0.38	+
0.15	0.85	+
0.32	0.68	+
0.25	0.75	+
0.54	0.46	+
0.33	0.67	+
0.45	0.55	+
0.35	0.65	+
0.72	0.28	+
0.38	0.62	+
0.4	0.60	+
0.32	0.68	+
0.32	0.68	+
0.28	0.72	+
0.44	0.56	+
0.12	0.88	+
0.15	0.85	+
0.4	0.60	+
0.18	0.82	+



DQA Surface Soil Report

Statistical Test Summary

Data	DCGLw - Data	Sign
0.56	0.44	+
0.63	0.37	+
0.56	0.44	+
0.52	0.48	+
0.28	0.72	+
0.5	0.50	+
0.33	0.67	+
0.61	0.39	+
0.3	0.70	+
0.42	0.58	+
0.12	0.88	+
0.29	0.71	+
0.25	0.75	+
0.18	0.82	+
0.13	0.87	+
0.23	0.77	+
0.2	0.80	+
0.28	0.72	+
0.78	0.22	+
0.16	0.84	+
0.75	0.25	+
0.68	0.32	+
0.63	0.37	+
0.54	0.46	+
0.69	0.31	+
0.69	0.31	+
0.89	0.11	+
1.14	-0.14	-
0.96	0.04	+
0.44	0.56	+
0.31	0.69	+
0.48	0.52	+
0.23	0.77	+
0.4	0.60	+
0.86	0.14	+
0.84	0.16	+
0.67	0.33	+
0.66	0.34	+
0.57	0.43	+
0.67	0.33	+
0.56	0.44	+

APPENDIX C

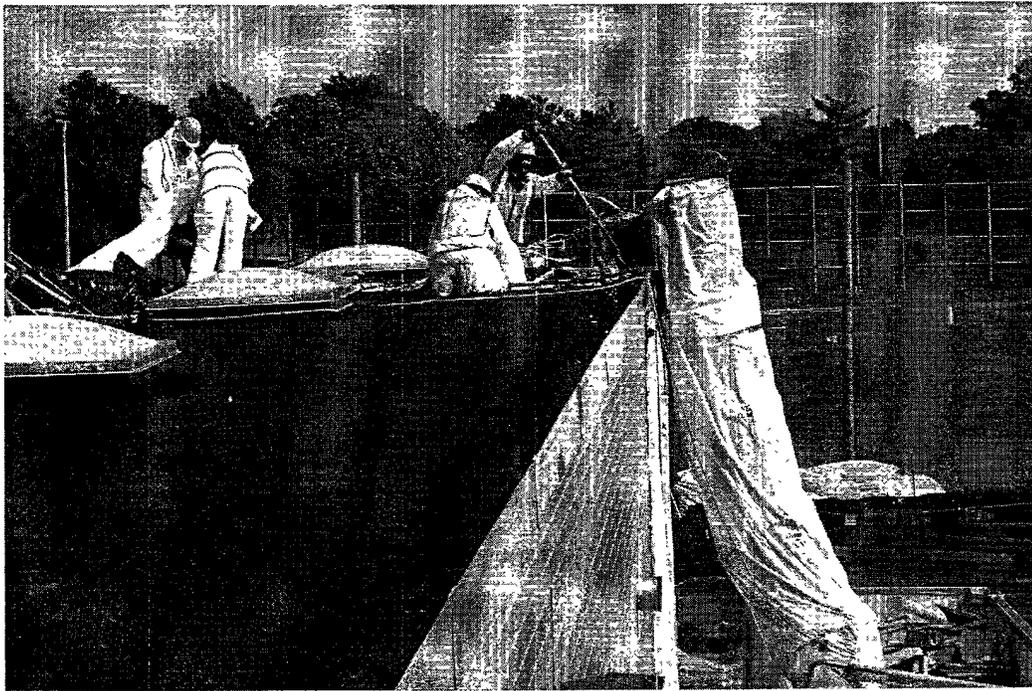
Appendix C – Photographs

Photographs are located on the CD in Appendix F.

Appendix C Photographs

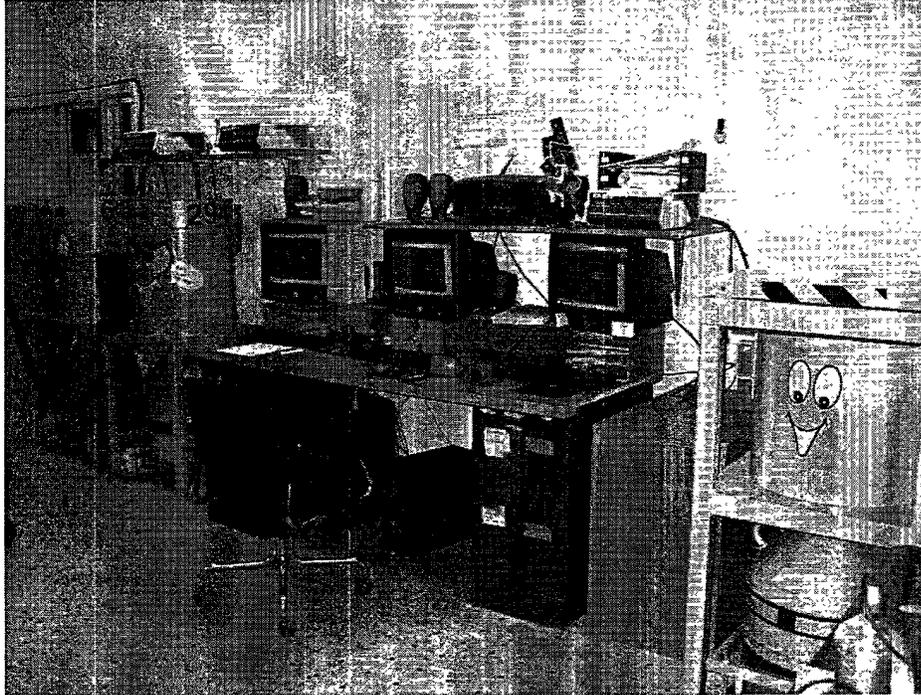


Photograph 1: 140 Building with the eastern three bays removed.



Photograph 2: Removing asbestos-containing roofing material from the two east bays of the 140 Building.

Appendix C Photographs

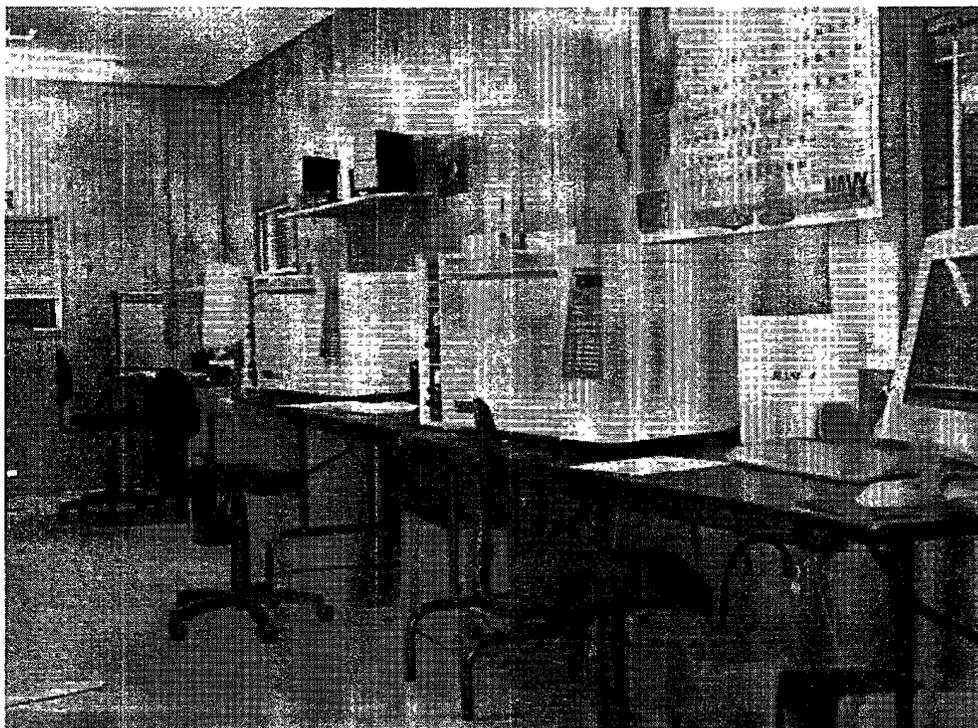


Photograph 3: Gamma spectroscopy analytical service.



Photograph 4: Gamma spectroscopy analytical service.

Appendix C Photographs

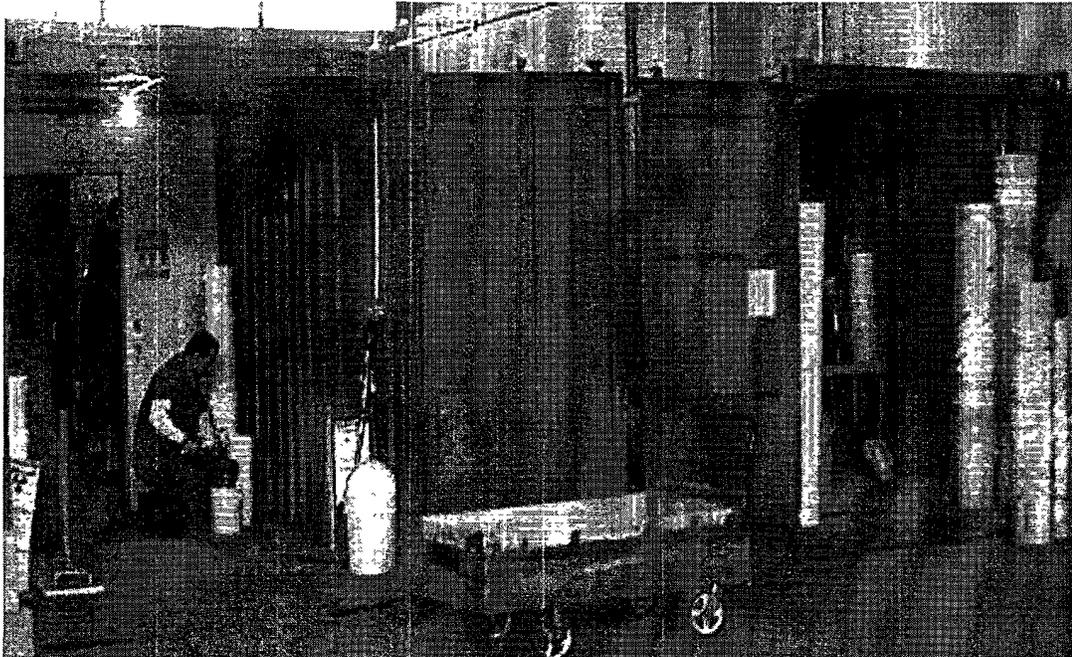


Photograph 5: Gas chromatographs in the on-Site SEI analytical service.



Photograph 6: Gas Chromatographs used by SEI for on-Site analytical services.

**Appendix C
Photographs**



Photograph 7: Sample preparation area, Building 140.



Photograph 8: Sample archive area, Building 140.

**Appendix C
Photographs**



Photograph 9: Interim storm water drainage system leach pools between the 140 and 100 Buildings, under construction.



Photograph 10: Interim storm water drainage system leach pools between the 140 and 100 Buildings, under construction.

Appendix C Photographs

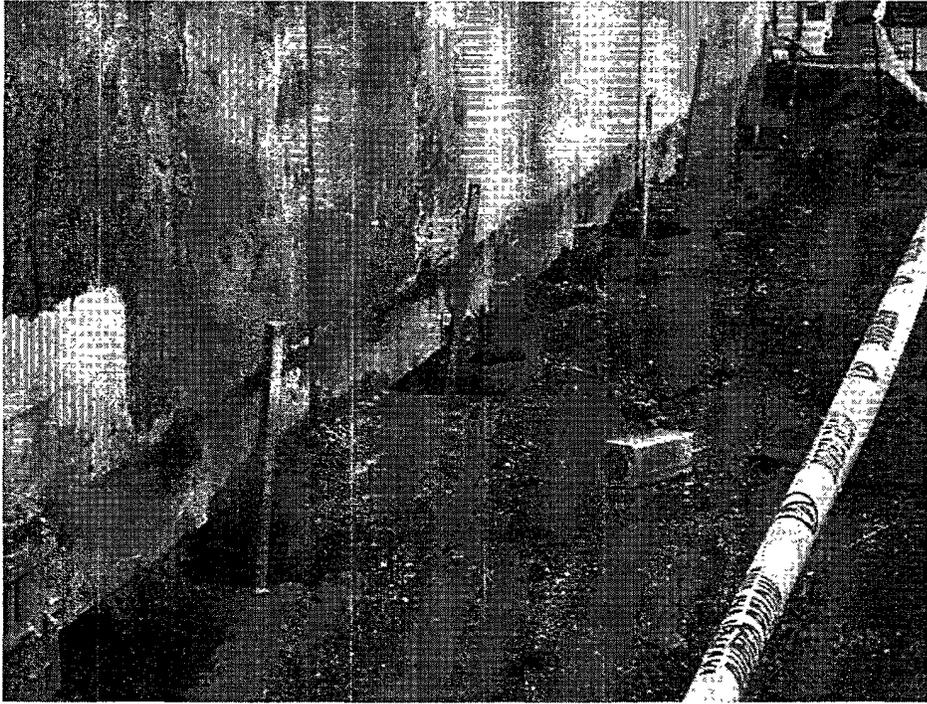


Photograph 11: Installing sheet pile east of the 140 Building.

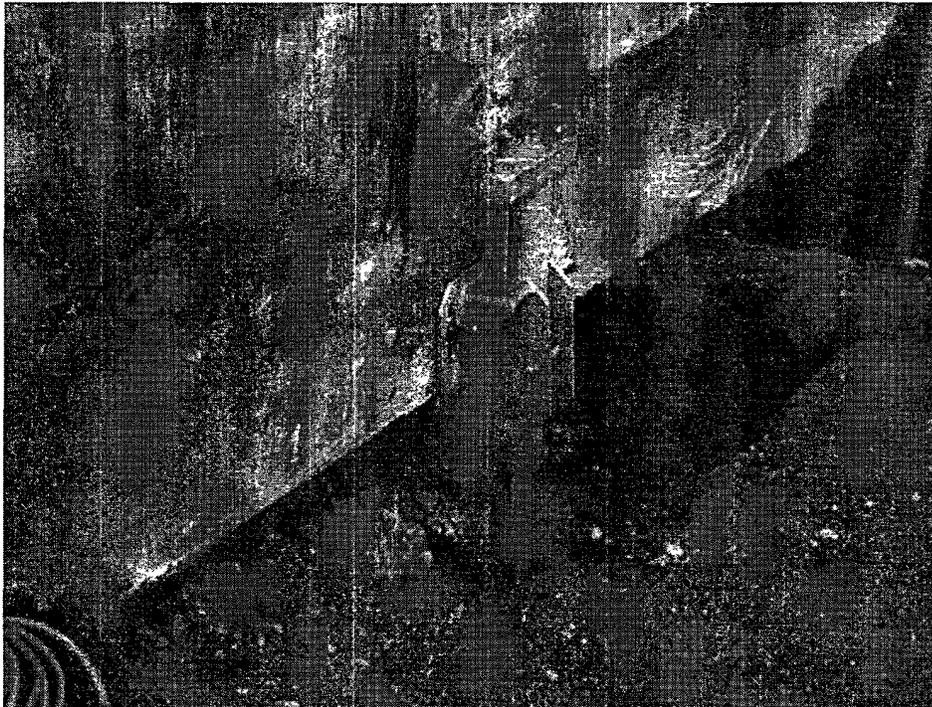


Photograph 12: Sheet pile wall with whaler.

Appendix C Photographs



Photograph 13: Installing helical piles on the south side of the 100 Building.



Photograph 14: Installed helical pile.

**Appendix C
Photographs**



Photograph 15: Cell 2, northwest corner bracing.

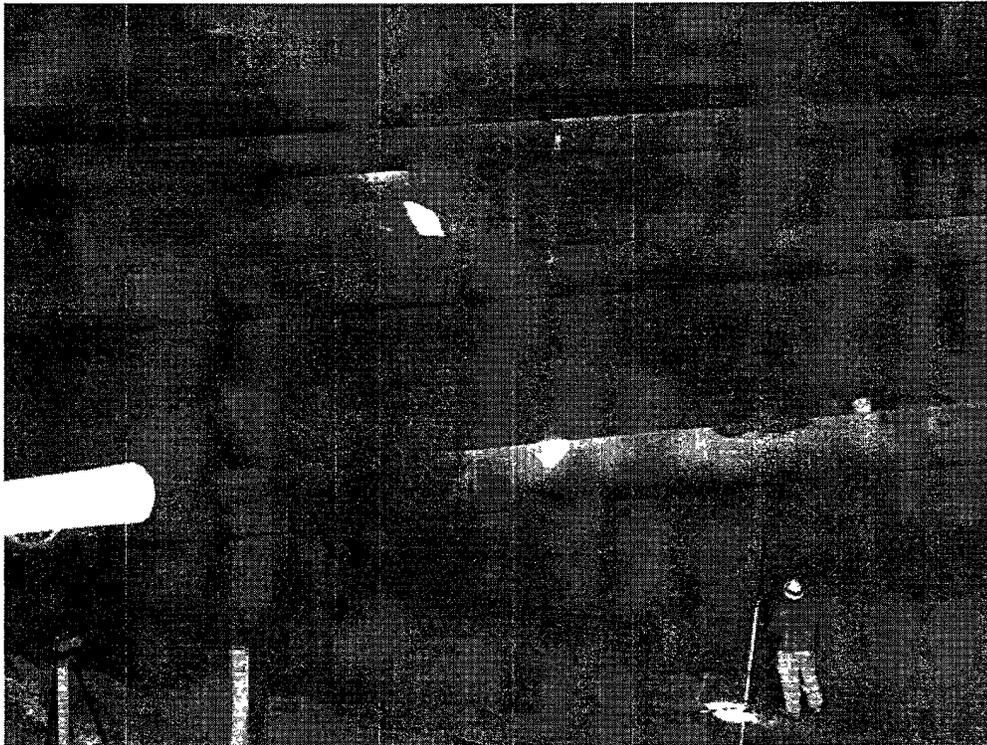
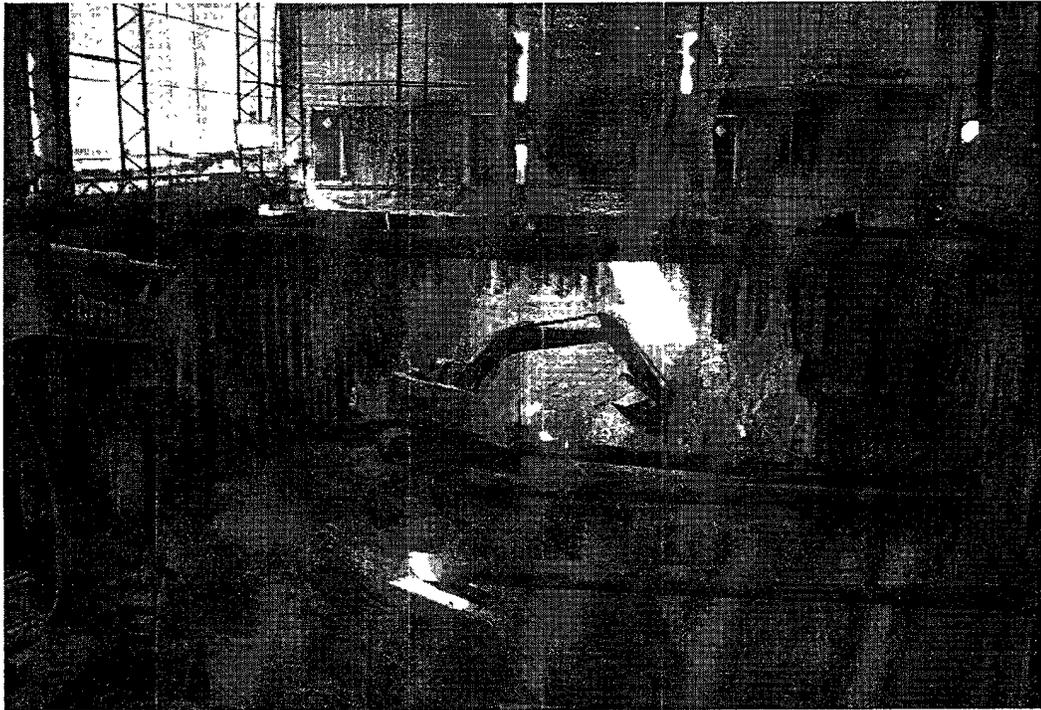
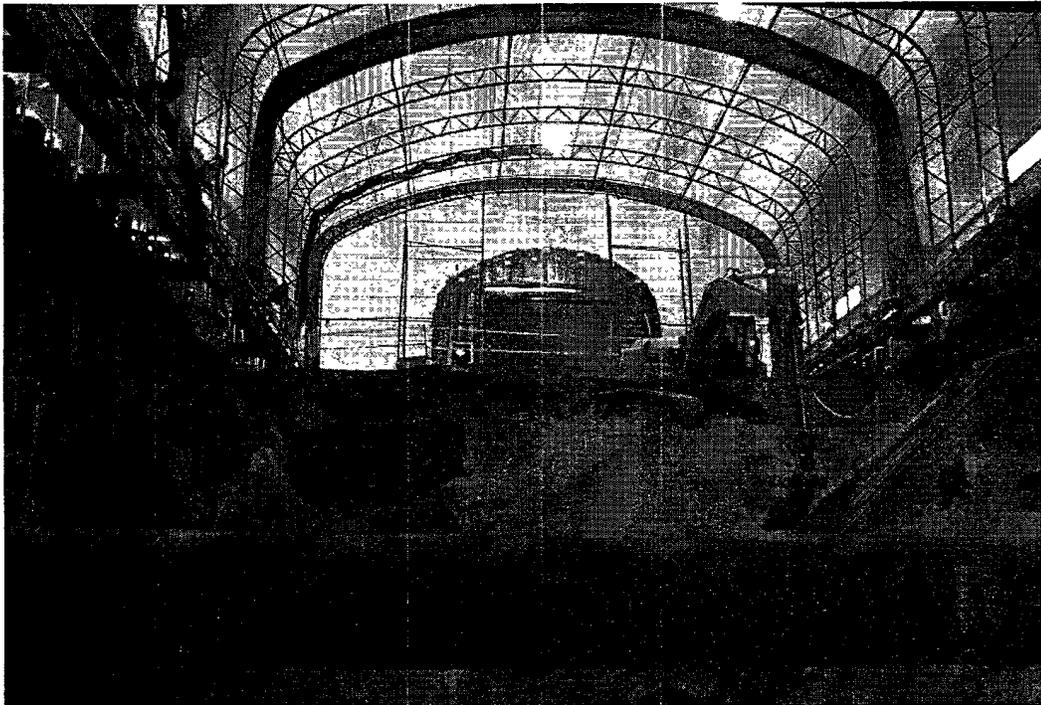


Photo 16: Cross-bracing of sheet piling to provide for deeper excavation in Cell 6.

**Appendix C
Photographs**



Photograph 17: Excavation within the excavation structure - Cell 6.

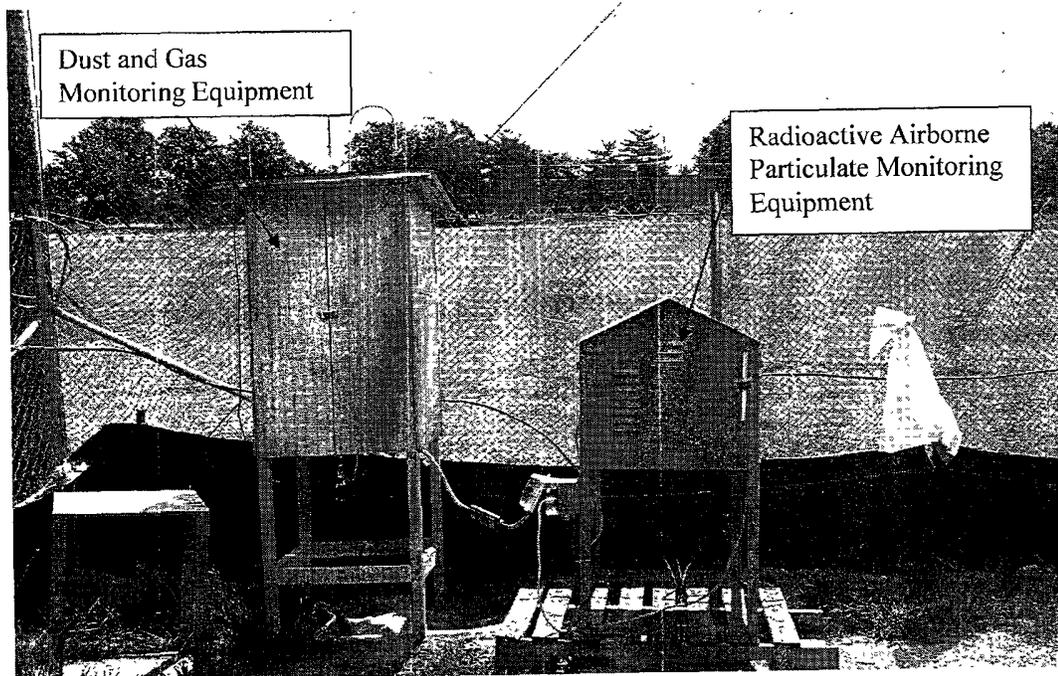


Photograph 18: Excavation within the excavation structure – Cells 5 and 6.

**Appendix C
Photographs**

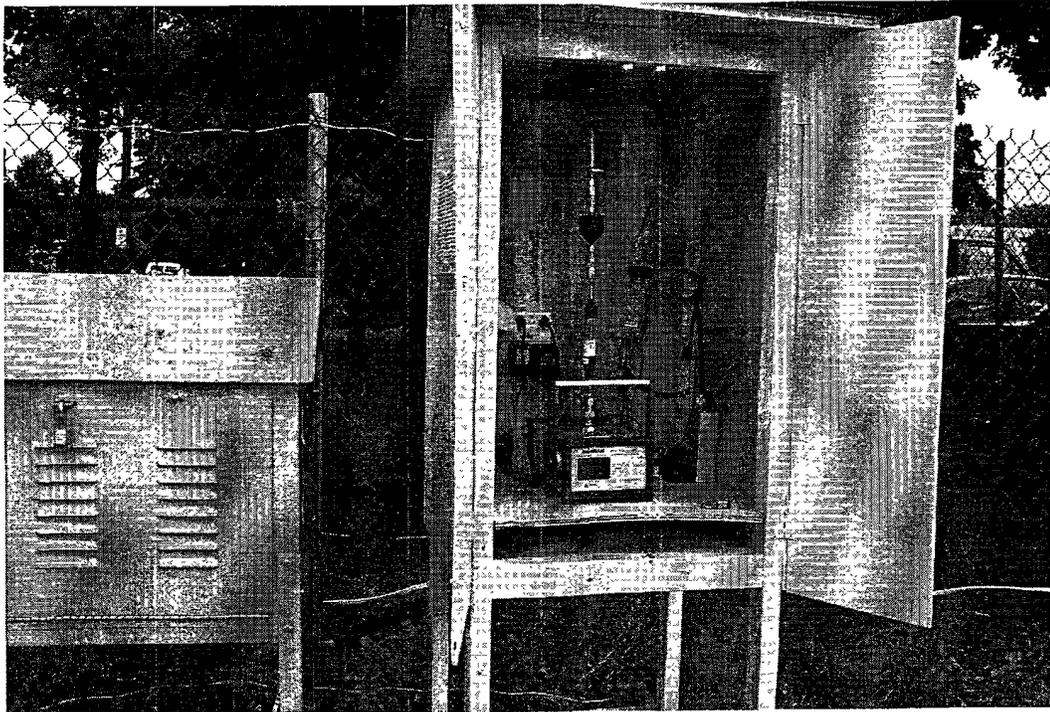


Photo 19: Cell 5, subcell S05; excavation to 52-54 feet inside of the sheet box.

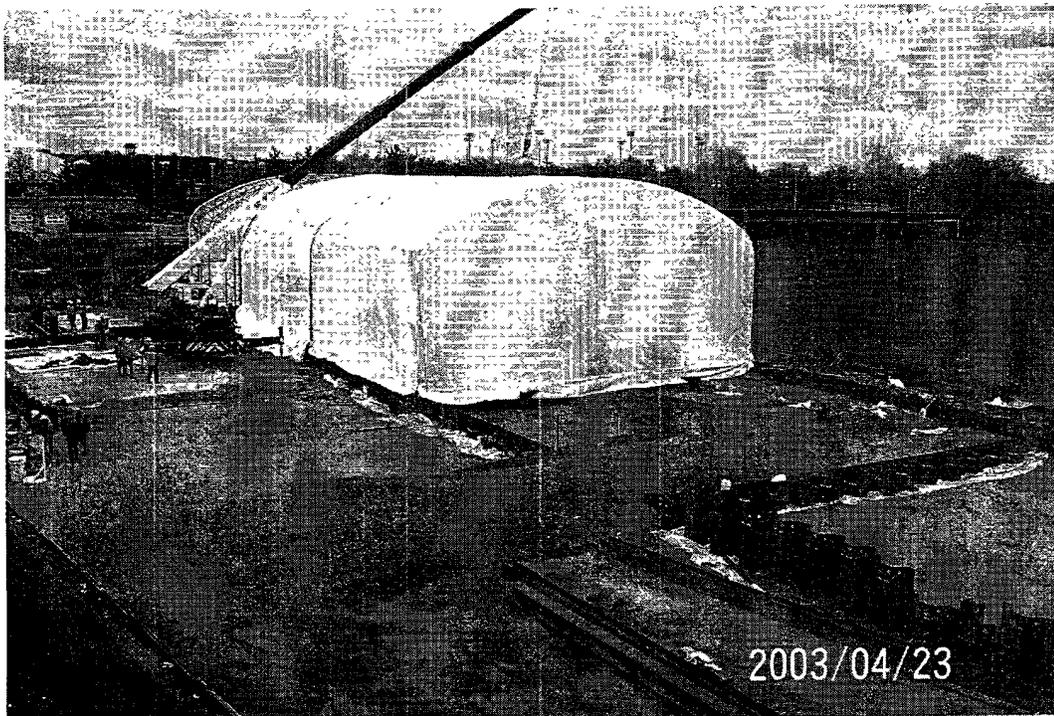


Photograph 20: CAMP station 2.

Appendix C
Photographs



Photograph 21: CAMP station 1. Airborne particulate and gas detectors located inside housing.



Photograph 22: Excavation enclosure.

**Appendix C
Photographs**

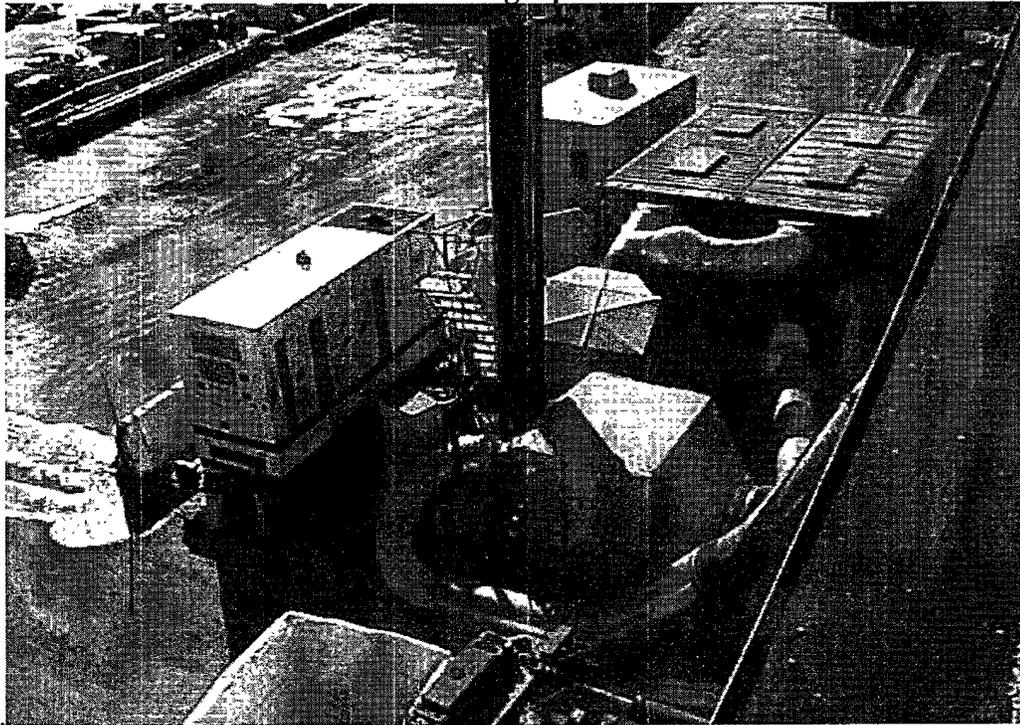


Photograph 23: Excavation enclosure airlock

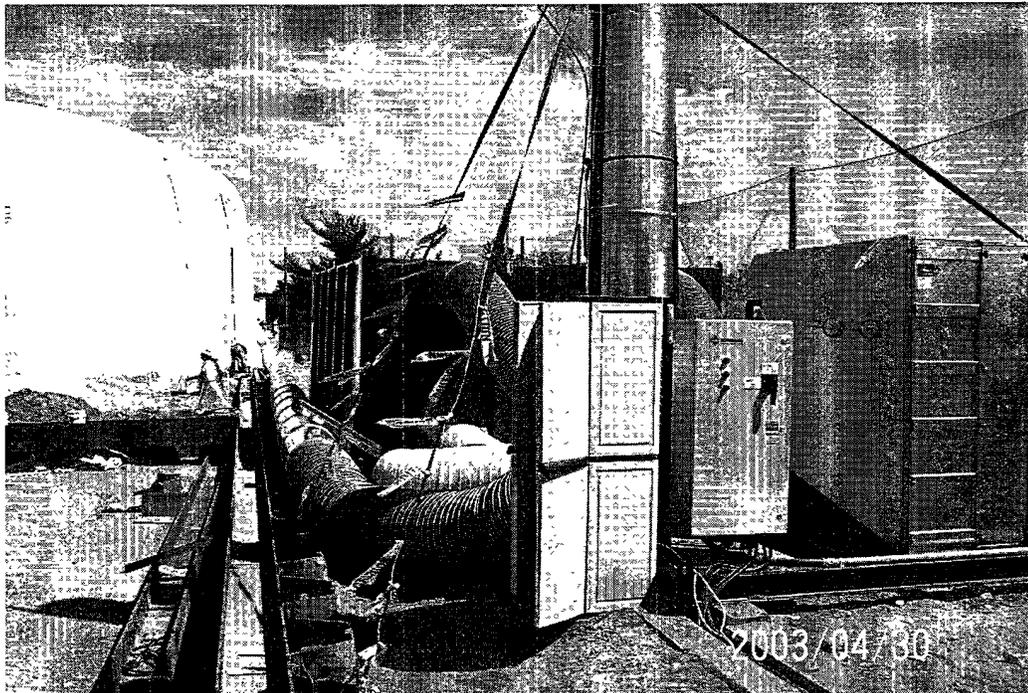


Photograph 24: Excavation enclosure with airlock entrance.

**Appendix C
Photographs**

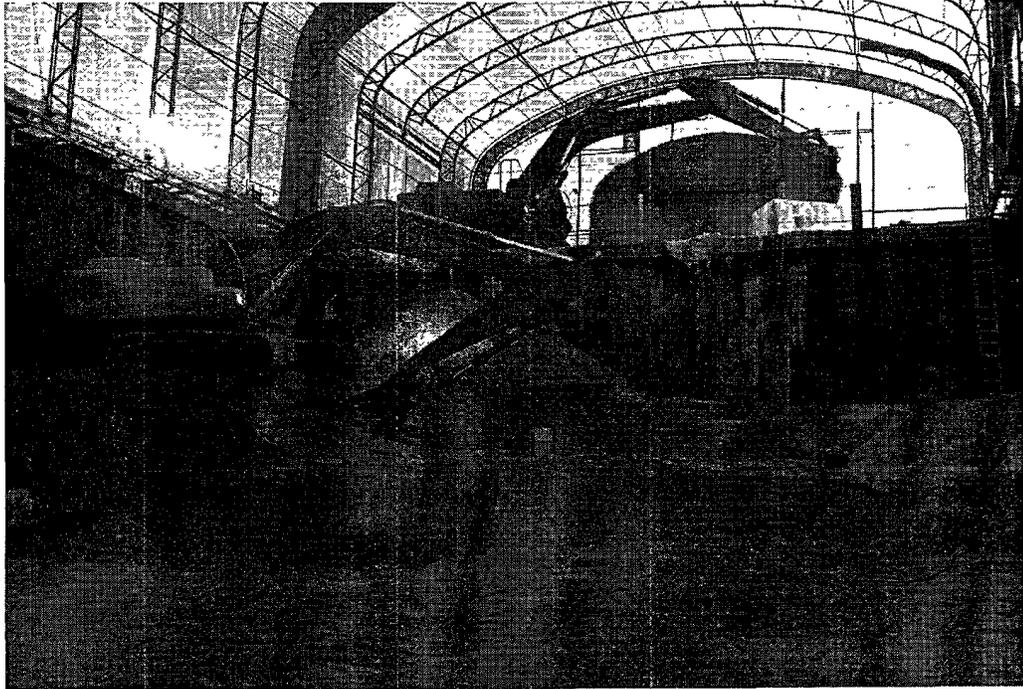


Photograph 25: Air plant, aerial view.

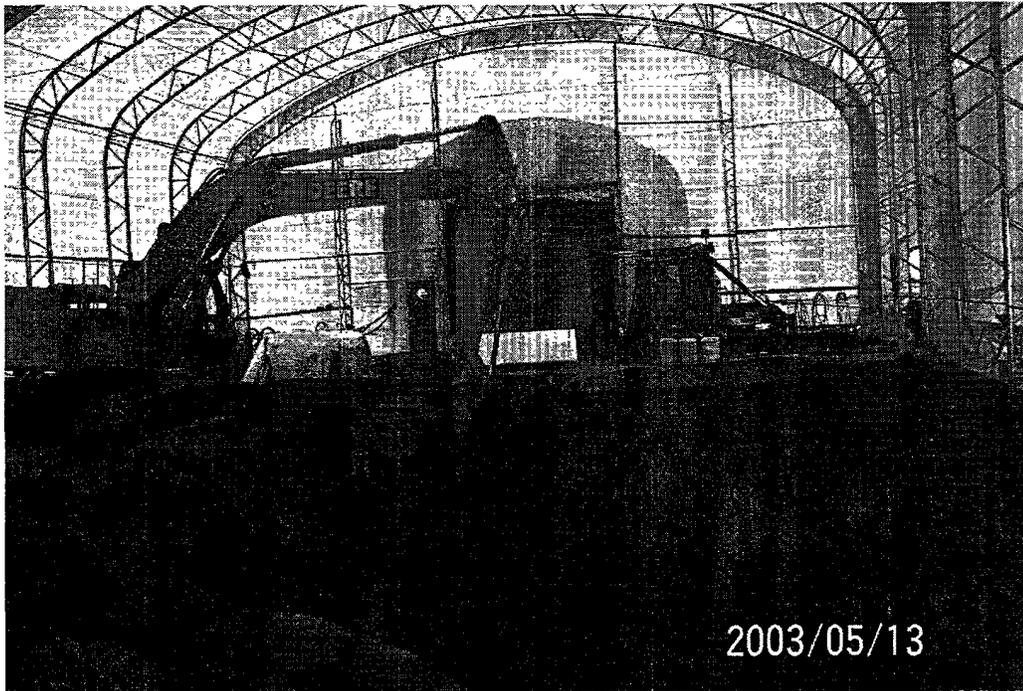


Photograph 26: Air plant showing ducts servicing excavation structure.

**Appendix C
Photographs**

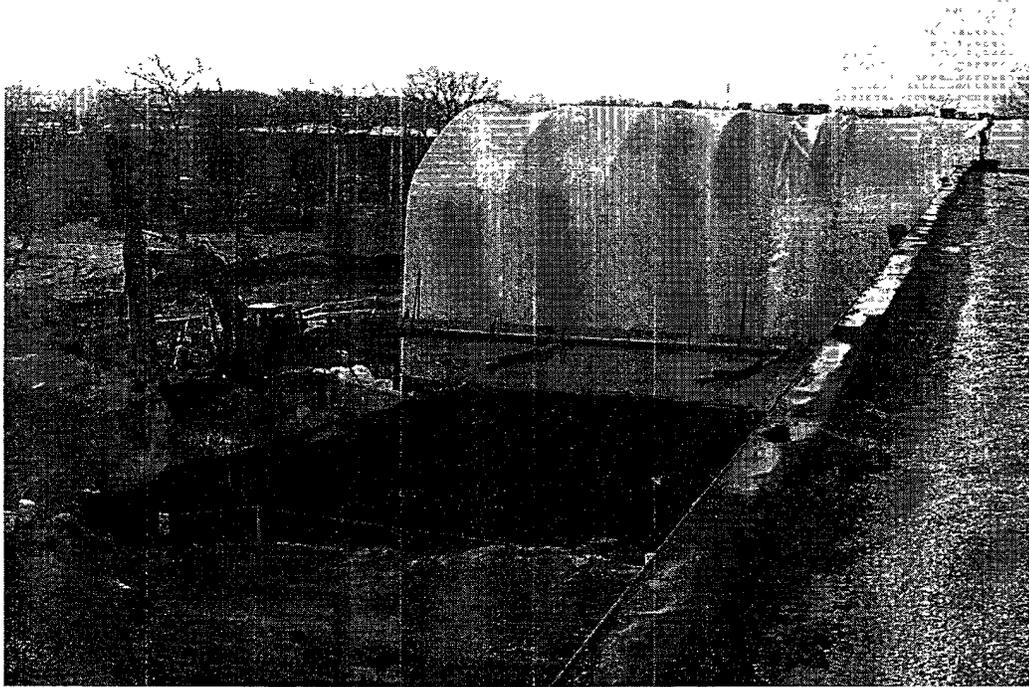


Photograph 27: Cell 4 excavation.

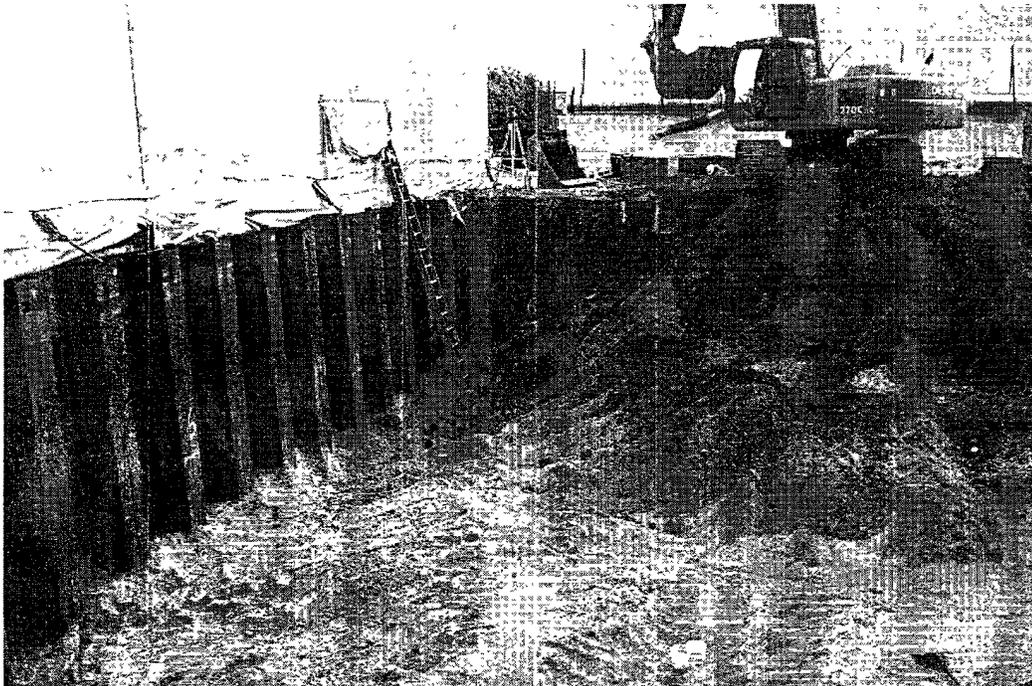


Photograph 28: Cell 1 excavation.

**Appendix C
Photographs**



Photograph 29: Cell 12 excavation.

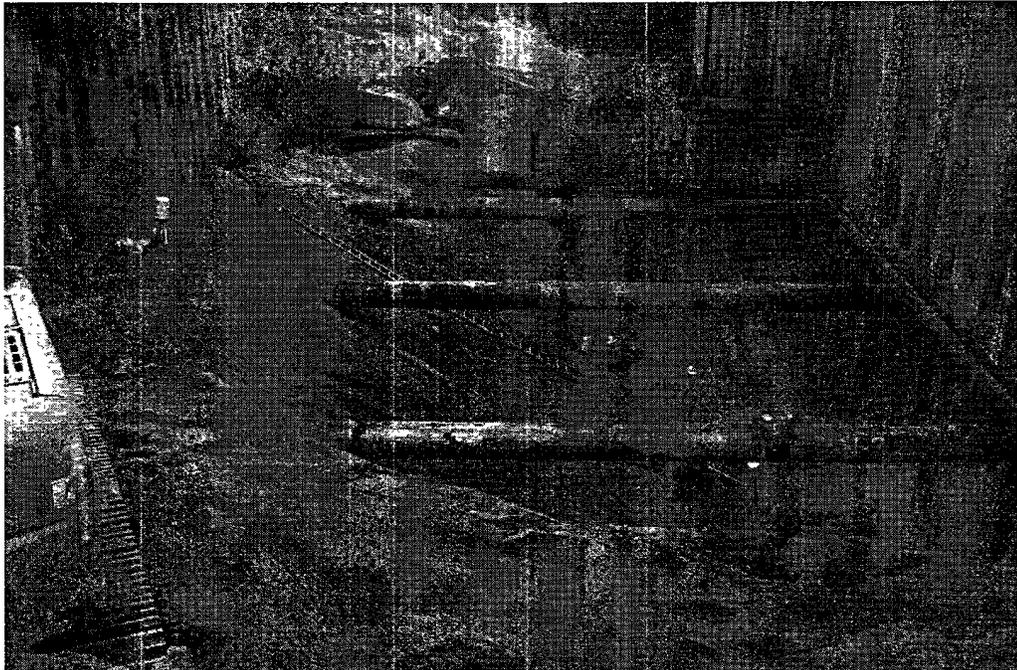


Photograph 30: Cell 12 excavation.

**Appendix C
Photographs**

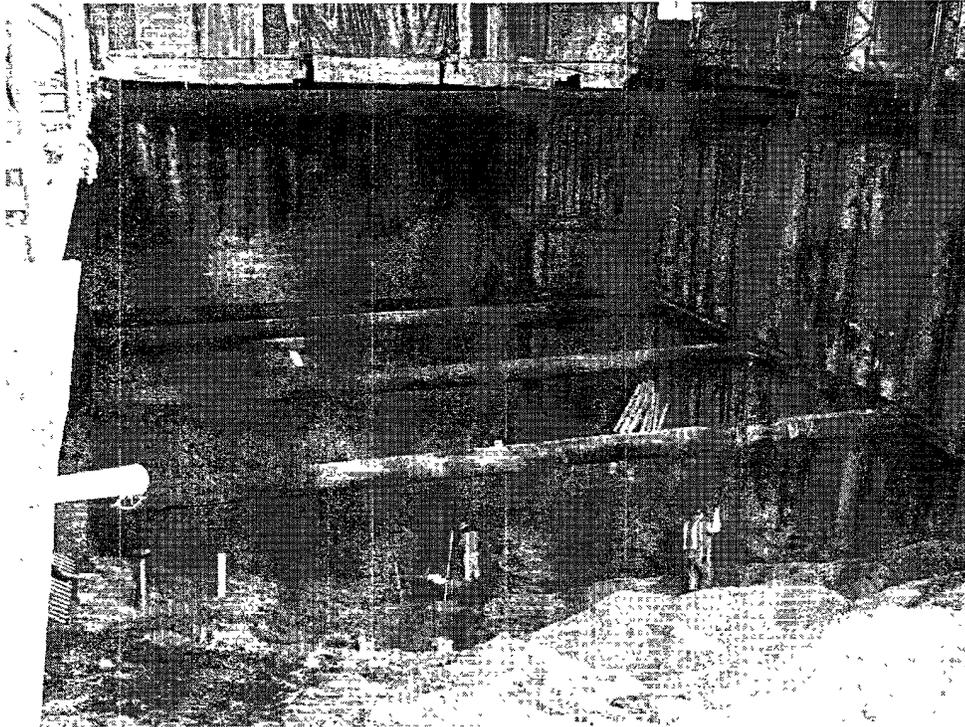


Photograph 31: Cells 5 and 6 excavation.



Photograph 32: Cells 5 and 6.

**Appendix C
Photographs**

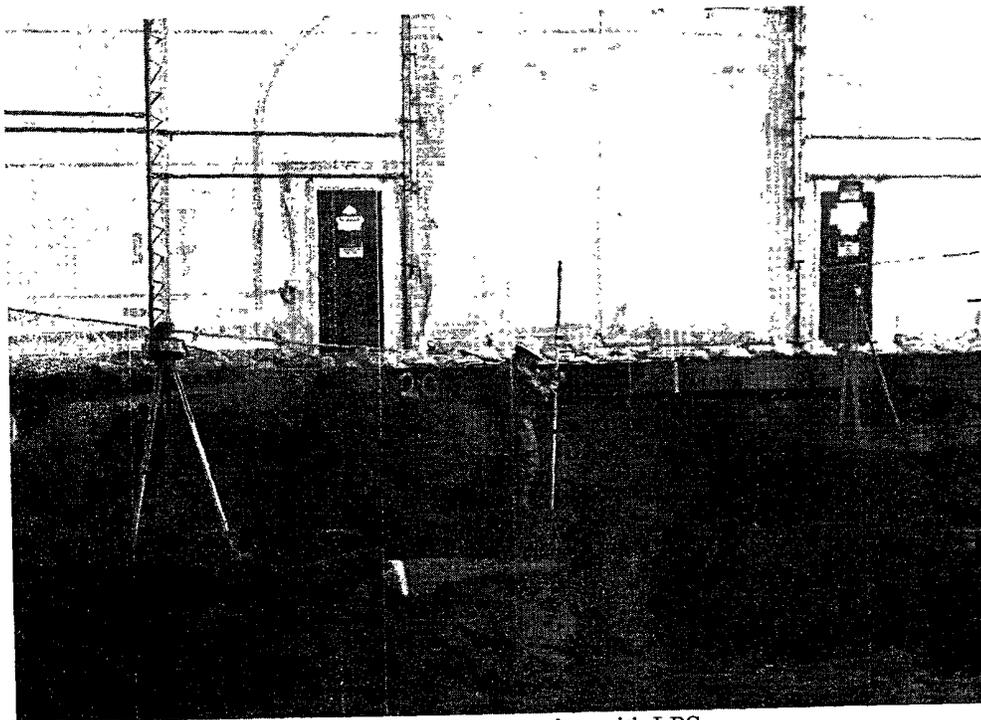


Photograph 33: Cells 5 and 6 excavation. Facing north and LPS in use.



Photograph 34: Cell 3 excavation.

**Appendix C
Photographs**



Photograph 35: Surveying with LPS.

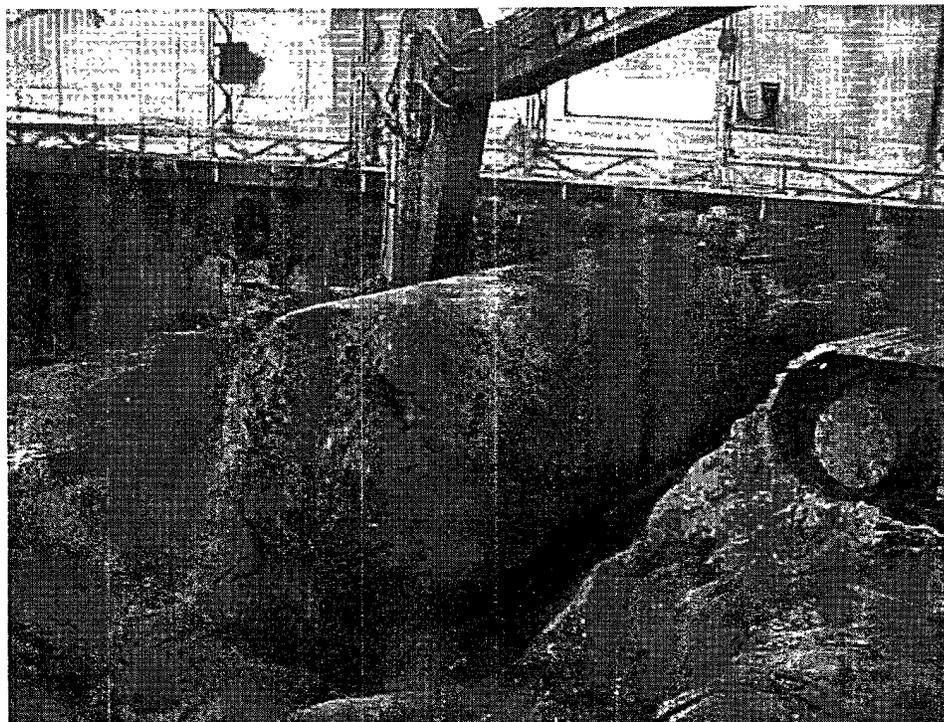


Photograph 36: Cell 9 – Field survey of blue-green material 6/1/04.

**Appendix C
Photographs**



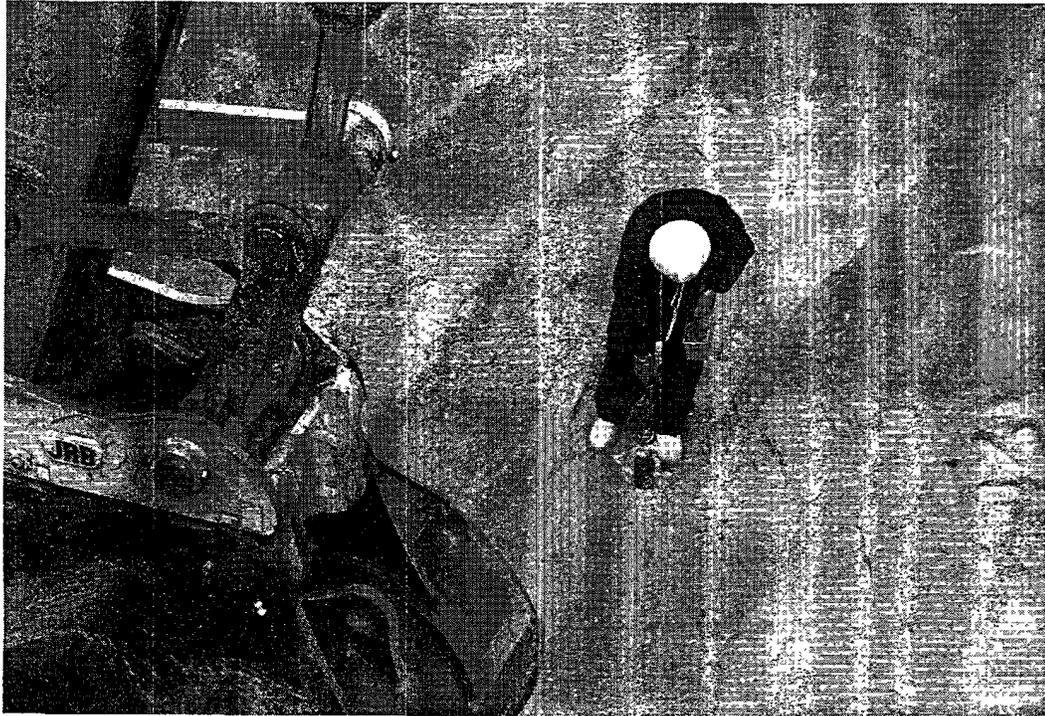
Photograph 37: Cell 4, subcell V18 – metal anomaly.



Photograph 38: Cell 2 – UST encountered.

Native File (Non-image file)...Printing skipped

**Appendix C
Photographs**



Photograph 41: Cell 14 gamma radiation walkover survey.



Photograph 42: Obtaining a waste sample.

**Appendix C
Photographs**



Photograph 43: Lift-Liner™ radiation survey.



Photograph 44: Lift-Liner™ weighing.

**Appendix C
Photographs**



Photo 45: Lift-Liner™ staging between the 140 and 100 Buildings.



Figure 46: Lift-Liner™ load-out to railyard.

**Appendix C
Photographs**



Photo 47: Lift-Liner™ loaded on a flat-bed truck for trip to West John Street rail siding.

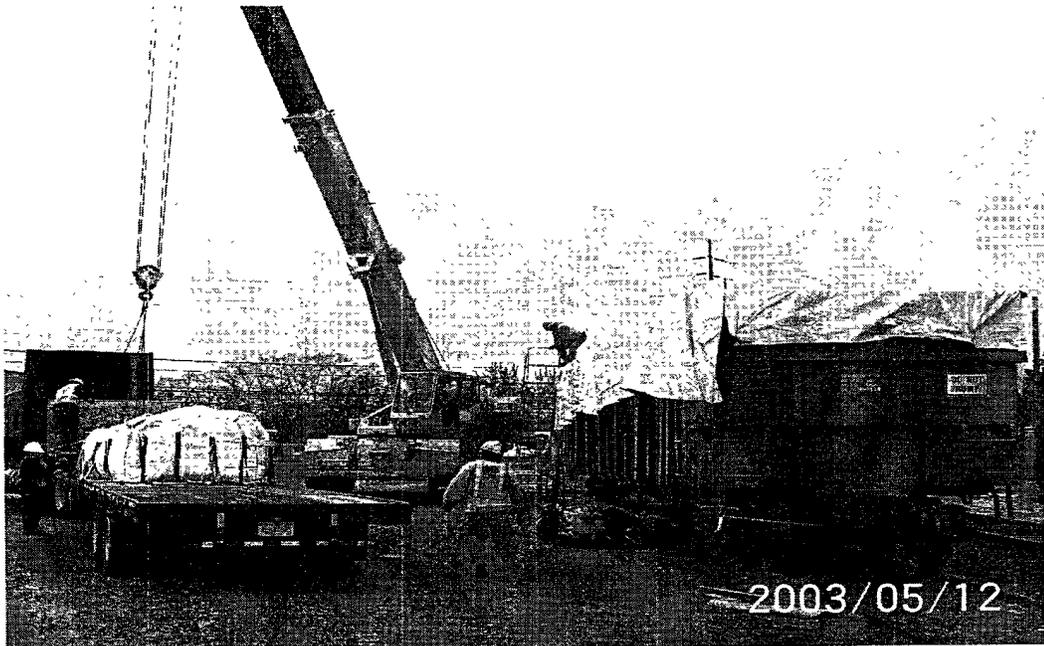
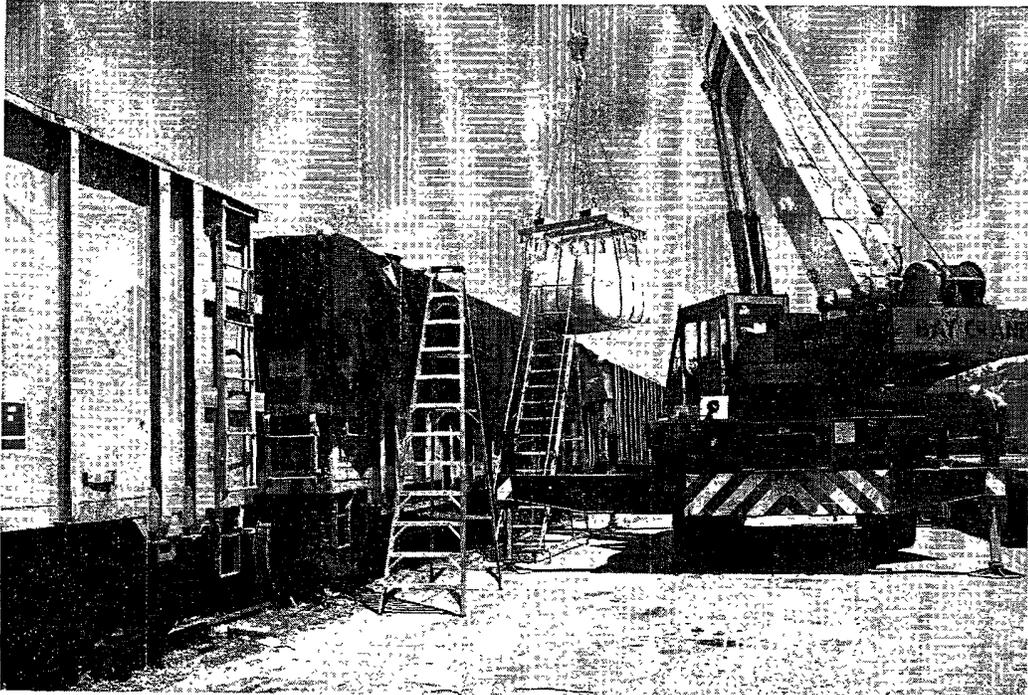


Photo 48: Lift-Liner™ being prepared for hoisting and placement in lined gondola.

Appendix C Photographs



Photograph 49: Loading Lift-Liner™ into lined gondola rail car.

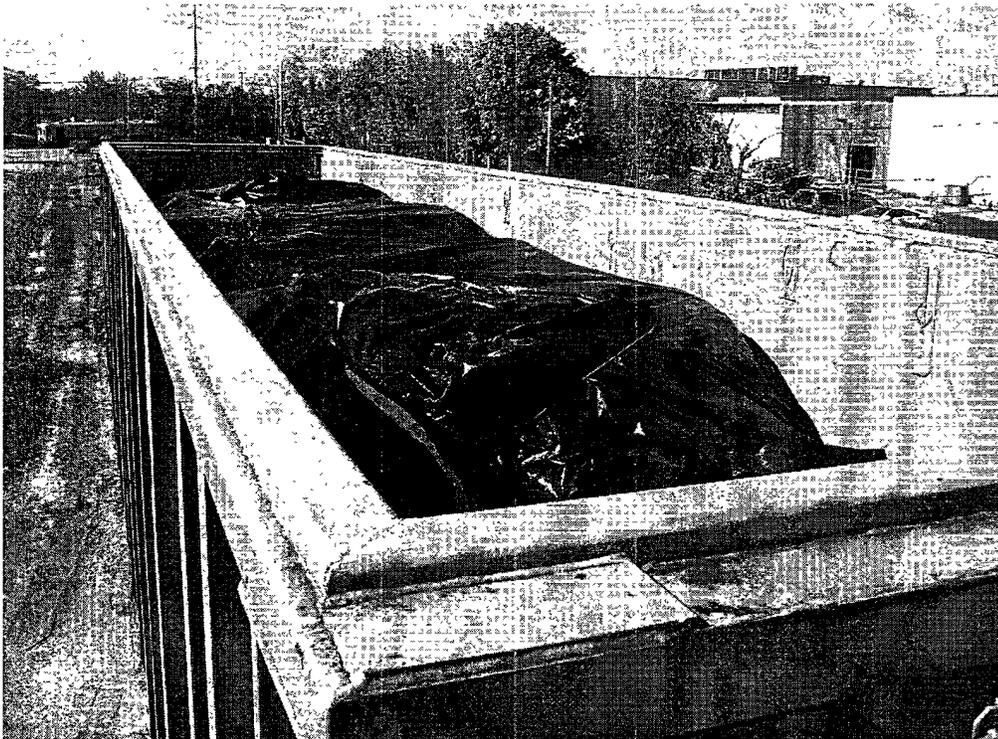


Photograph 50: Lift-Liner™ in gondola.

Appendix C
Photographs

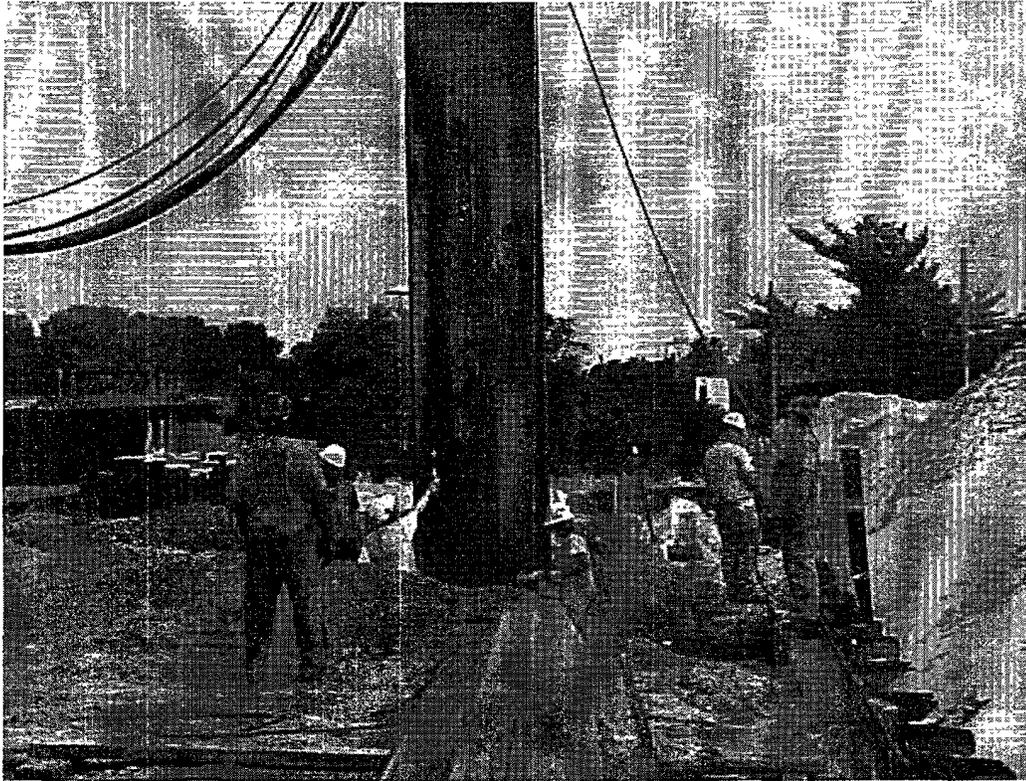


Photograph 51: Wrapping gondola liner over Lift-Liners™.



Photograph 52: Wrapped Lift-Liners™ in gondola car prepared for shipment.

**Appendix C
Photographs**



Photograph 53: Radiation survey of sheet pile as it is being removed.

APPENDIX D
Data Validation and Data Management

TABLE OF CONTENTS

Executive Summary.....	1
1.0 Data Validation.....	2
1.1 On-Site Volatile Organic Compounds and Total Petroleum Hydrocarbon Diesel Analyses - Stone Environmental Inc.....	5
1.1.1 Sample Receipt and Handling.....	5
1.1.2 Initial Calibration.....	5
1.1.3 Continuing Calibration.....	6
1.1.4 Blanks.....	6
1.1.5 Surrogates.....	6
1.1.6 Matrix Spike/Matrix Spike Duplicate.....	7
1.1.7 Laboratory Control Samples.....	7
1.1.8 Laboratory Duplicate Samples.....	7
1.1.9 Compound Identification.....	7
1.1.10 Compound Quantitation.....	8
1.1.11 Field Duplicate.....	8
1.2 On-Site Gamma Spectroscopy Analysis.....	8
1.2.1 Data Package Completeness.....	8
1.2.2 Sample Receipt and Preparation.....	9
1.2.3 Holding Times.....	9
1.2.4 Initial Calibration.....	9
1.2.5 Blanks.....	9
1.2.6 Laboratory Duplicates.....	9
1.2.7 Minimum Detectable Activity.....	9
1.2.8 Quantitation.....	10
1.2.9 Field Duplicates.....	10
1.3 Volatile Organic Compounds - Severn Trent Laboratories, Inc.....	10
1.3.1 Holding Times.....	10
1.3.2 Initial Calibration.....	11
1.3.3 Continuing Calibration.....	11
1.3.4 Blanks.....	11
1.3.5 Surrogates.....	12
1.3.6 Matrix Spike/ Matrix Spike Duplicate.....	12
1.3.7 Laboratory Control Sample.....	12
1.3.8 Internal Standards.....	13
1.3.9 Tentatively Identified Compounds.....	13
1.3.10 Field Blanks/Trip Blanks.....	13
1.3.11 Field Duplicates.....	13
1.4 Semivolatile Organic Compounds - Severn Trent Laboratories, Inc.....	14
1.4.1 Holding Times.....	14
1.4.2 Initial Calibration.....	14
1.4.3 Continuing Calibration.....	15
1.4.4 Blanks.....	15
1.4.5 Surrogates.....	15

1.4.6	Matrix Spike/ Matrix Spike Duplicate	15
1.4.7	Laboratory Control Sample.....	15
1.4.8	Internal Standards	16
1.4.9	Tentatively Identified Compounds	16
1.4.10	Field Blanks/Trip Blanks	16
1.4.11	Field Duplicates	16
1.5	Pesticide, PCBs, and Herbicides Compounds - Severn Trent Laboratories, Inc.	16
1.5.1	Holding Times	17
1.5.2	Initial Calibration.....	17
1.5.3	Continuing Calibration	17
1.5.4	Blanks	18
1.5.5	Surrogates	18
1.5.6	Matrix Spike/ Matrix Spike Duplicate	18
1.5.7	Laboratory Control Sample.....	18
1.5.8	Compound Identification	19
1.5.9	Field Blanks	19
1.5.10	Field Duplicates	19
1.6	Metals - Severn Trent Laboratories, Inc.	19
1.6.1	Holding Times	20
1.6.2	Instrument Calibration	20
1.6.3	Blanks	20
1.6.4	Laboratory Control Sample.....	21
1.6.5	Matrix Spike/ Matrix Spike Duplicate	21
1.6.6	Laboratory Duplicates.....	21
1.6.7	ICP Serial Dilution Analyses.....	22
1.6.8	Field Duplicates	22
1.7	Alpha Spectroscopy Analysis - Severn Trent Laboratories, Inc.....	22
1.7.1	Holding Times	22
1.7.2	Blanks	23
1.7.3	Laboratory Control Samples	23
1.7.4	Tracer Recovery.....	23
1.7.5	Laboratory Duplicates.....	23
1.7.6	Quantitation	23
1.7.7	Field Duplicates	24
1.8	Gamma Spectroscopy Analysis - Severn Trent Laboratories, Inc.	24
1.8.1	Holding Times	24
1.8.2	Initial Calibration.....	24
1.8.3	Continuing Calibration	25
1.8.4	Blanks	25
1.8.5	Laboratory Control Samples	25
1.8.6	Laboratory Duplicates.....	25
1.8.7	Quantitation	26
1.8.8	Field Duplicates	26
1.9	Data Quality Indicators (Method Quality Objectives).....	26
1.9.1	On-Site Volatile Organic Compounds and Total Petroleum Hydrocarbon data.....	27
1.9.1.1	Precision.....	27
1.9.1.2	Accuracy	27
1.9.1.3	Representativeness.....	27
1.9.1.4	Comparability	27
1.9.1.5	Completeness	27

Appendix D

1.9.1.6	Sensitivity	27
1.9.2	On-Site Gamma Spectroscopy Data	28
1.9.2.1	Precision.....	28
1.9.2.2	Accuracy	28
1.9.2.3	Representativeness.....	28
1.9.2.4	Comparability	28
1.9.2.5	Completeness.....	29
1.9.3.	Severn Trent Laboratories, Inc. Data.....	29
1.9.3.2	Accuracy	29
1.9.3.3	Representativeness.....	29
1.9.3.4	Comparability	29
1.9.3.5	Completeness.....	30
1.9.3.6	Sensitivity	30
1.10	Data Usability Summary Report (DUSR) Summary.....	30
2.0	Data Management	31
2.1	Off-Site Data Management.....	31
2.2	On-Site Data Management	32
3.0	REFERENCES	

EXECUTIVE SUMMARY

This report addresses data quality for soil samples collected at the former Sylvania Electric Products Incorporated Facility in Hicksville, New York (the Site). Sample collection activities were conducted by URS Corporation (URS) from April 30, 2003 through September 30, 2004.

The environmental samples collected for the Site were submitted to on-Site Stone Environment Inc. (SEI) analytical service, on-Site gamma spectroscopy service, and off-Site Severn Trent Laboratories, Inc (STL) of Earth City, Missouri for analyses using United States Environmental Protection Agency (USEPA) guidance methods. The analytical data generated for this investigation were evaluated by URS using the quality assurance/quality control (QA/QC) criteria established in the methods as guidance. Non-conformances from the QA/QC criteria were qualified based on guidance provided in Section 2.0 below.

Seventeen on-Site VOC/TPH data points were rejected due to MS/MSD recovery or surrogate recovery failure. Some on-Site positive radium-226 (^{226}Ra) results were reported without a minimum detectable activity (MDA) due to the failing of the sensitivity test and/or a peak shape test. Positive ^{226}Ra results were flagged "R, Q". Most of the on-Site ^{226}Ra results were not reported due to chromatography that displayed poor shape (failed a peak shape test). There were 3,082 data points from off-Site laboratories that were rejected due to relative response factors (RRFs), matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample/ laboratory control sample duplicate (LCS/LCSD), or surrogate recovery failures.

Some of the results that were qualified as estimated ("J" and "UJ") due to QC anomalies should be considered conditionally usable. None of the anomalies of method non-conformances were significant enough to jeopardize the usability of the data.

The completeness objective of 90 percent, as stated in the quality assurance project plan (QAPP), was met for all analyses.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical method. Except data flagged "R", all data are usable, as qualified, for their intended purpose based on the data reviewed.

1.0 INTRODUCTION

Data validation reviews were performed by each analytical quality assurance/quality control (QA/QC) manager and reviewed by URS chemists for all data packages received from on-Site Stone Environment Inc. (SEI), on-Site gamma spectroscopy laboratories, and Severn Trent Laboratories, Inc. (STL) in St. Louis, MO. The following guidelines were used for data validation review:

Analytical Services Protocol, *New York State Department of Environmental Conservation*. Guidance documents including Exhibits A, B, C, D, E, F, G, H, and I. (June 2000).

Science Applications International Corporation Laboratory Data Validation Guidelines for Evaluating Radionuclide Analysis (143-ARCS-93.08 Revision 06, June 2000).

Standard Operating Procedure for Determination of Aromatic and Chlorinated Volatile Organics and Lightweight Petroleum Hydrocarbons (C4–C16) Using Solid Phase Micro-extraction and A Gas Chromatograph in Soil and Water Samples, SEI-10.1.2, Revision 2, March, 31, 2004.

Standard Operating Procedure for Gamma Spectroscopy Operation and Analysis, SOP-RAD-009, Revision 1, February 4, 2004.

United States Department of Energy (USDOE) “Guidance for Radiochemical Data Validation” Draft RD4, October 4, 1995.

United States Environmental Protection Agency (USEPA) “Contract Laboratory Program National Functional Guidelines for Organic Data Review,” October, 1999.

URS et al. 2003. Comprehensive Soil Remediation Program Work Plan – Former Sylvania Electric Products Incorporated Facility dated January 18, 2002 (Revision 5: June 2003).

USEPA “Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,” October, 1999.

USEPA “Region II Standard Operating Procedure for Organic Data Review” SOP HW-6, rev.12, March 2001.

USEPA *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, (SW846), Final Update III A, April 1998.

The analytical procedures employed in the course of the analyses are taken from United States Environmental Protection Agency (USEPA), Test Methods for Evaluating Solid Wastes (SW) SW-846 and/or laboratory standard operating procedures (SOPs). The correct and current methods as specified in the Work Plan (Revision 5: June 2003) were used for analysis.

The above validation guidelines were developed for application to the USEPA Contract Laboratory Program (CLP) and as such are not directly applicable to the Resource Conservation and Recovery Act (RCRA) methods of analysis employed. Those guidelines were applied to the methods of analysis such that the specifications of the methods take precedence over the specifications of the validation protocol in those instances where the specifications differ.

The following qualifiers have been used by the on-Site and/or off-Site laboratories:

Flags	Interpretation
U or <	Non-detect result at the established laboratory reporting limit.
B	In metal analysis, this flag indicates an estimated value or a value below the established reporting limit but above the method detection limit. Note: All "B" qualifiers for the metals analyses were generally revised to "J" to provide consistency between the organic and inorganic databases. In organic analyses, this flag indicates that compound was also identified in the corresponding method blank.
D	Results from dilution analysis.
J	In organic analysis, this flag indicates an estimated value or a value below the established reporting limit but above the method detection limit.
E	In organic analyses, this flag identifies compounds whose concentrations exceed the calibration range of the instrument for the specific analysis. In inorganic analyses, this flag identifies that the inductively coupled plasma (ICP) serial dilution percent difference (%D) exceeded the control limit due to matrix effects.
N	Indicates a result associated with an MS/MSD percent recovery that exceeds laboratory control limits.
S	Analysis determined by method of standard addition (MSA)
*	Indicates a result associated with an MS/MSD relative percent difference (RPD) that exceeds laboratory control limits.
#	In on-Site gamma spectroscopy results, this flag identifies that all peaks for activity calculation had bad shape.

The following data validation qualifiers were used:

Flags	Interpretation
U	The datum should be considered a non-detect at the value reported.
UJ	The datum should be considered a non-detect; however, the detection limit may be inaccurate.
R	The datum is unusable due to serious quality control (QC) failures.
J	The datum should be considered an estimated value, more highly biased or variable than normal.
NJ	The analysis indicates the presence of a compound that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
S	Screening Data. Data quality cannot be fully assessed due to lack of QC information. (See data validation report for detail discussion.)

The data validation qualifiers and reason codes were entered into the database by URS during the data review process to simplify the presentation of data in the final report per the USEPA Region II Guidance.

The reason codes used by URS indicates the specific data quality control failure or laboratories/instrument performance problems. The following reason codes have been used:

Location	Analysis	Reason Code	Interpretation
On-Site Organic Laboratory SEI	VOC/TPH	c	Calibration failure or unstable (%D) response
		d	MS/MSD or LCS/LCSD RPD imprecision
		e	Sample preservation, handling, or cooler temperature failure
		f	Field duplicate imprecision
		m	MS/MSD recovery failure
		q	Concentration exceeded the linear range
		r	Linearity (percent relative standard deviation (%RSD) or correlation (r)) failure in initial calibration
		s	Surrogate failure
		z	Method blank and/or storage blank contamination
		q or k	Laboratory duplicate imprecision
On-Site Gamma Spec.	Gamma Spec.	h	Holding time violation
		c	Calibration failure
		k	Laboratory duplicate imprecision
		f	Field duplicate imprecision
		Q	Missing minimum detectable activity (MDA)
		Q1	Sample result was calculated based on bad peak shape
		Q2	Total uncertainty greater than 100%
Off-Site STL	*VOC/ *SVOC/ *Pesticides/ **PCB/ *Herbicides/ -Metals/ ^Radionuclide	c	Calibration failure; poor relative response factor (RRF) or unstable (%D) response
		d	MS/MSD or LCS/LCSD RPD imprecision
		f	Field duplicate imprecision
		*g	Dual column confirmation imprecision
		h	Holding time violation
		l	LCS recovery failure
		m	MS/MSD recovery failure
		n	Internal standard failure
		q	Concentration exceeded the linear range
		r	Linearity (%RSD or r) failure
		s	Surrogate failure
		w	Common laboratory contaminant
		*w	*Identification criteria failure
		-w	-Contract Required Detection Limit (CRDL) standard failure
		^w	^Tracer recovery failure
		x	Field and/or equipment blank contamination
		y	Trip blank contamination
		z	Method blank and/or storage blank contamination
		Q	Other-specified on bottom of result form
		Q1	^Result raised to the minimum detectable concentration
Q2	^Total uncertainty greater than reported result		

*TPH= total petroleum hydrocarbons

*VOC= volatile organic compound

*SVOC=semi-volatile organic compound

*PCB=polychlorinated biphenyls

In the sections that follow, general findings of the validation effort are presented. Detail data validation efforts were discussed in the individual data validation reports and are available upon request. Each review begins with a listing of the validation parameters assessed. An asterisk before any individual item indicates that the data were determined to be acceptable in that area of review. Specifically, the data are deemed to be acceptable if (1) all technical criteria were met, or (2) any observed failures have no impact

Appendix D

Page 4 of 34

Revision 6-10-05

GTES0003743

on data quality and no data qualification is indicated. The analytical data packages and the data validation notes are on file at the URS Linthicum, Maryland office and at the Hicksville Site and are available for review upon request.

1.1 On-Site Volatile Organic Compounds and Total Petroleum Hydrocarbon Diesel Analyses - Stone Environmental Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- Sample Receipt and Handling;
- * • Holding Times;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Surrogates;
- Matrix Spike/Matrix Spike Duplicate;
- Laboratory Control Samples;
- Laboratory Duplicate Samples;
- * • Internal Standards;
- Compound Identification;
- Compound Quantitation; and
- Field Duplicates.

1.1.1 Sample Receipt and Handling

All VOC samples were acceptable with the exception of sample 12496-C-WS-S-06R067213-40.0-S1 that lost approximately 1-2 ml of methanol. The field sample results were non-detect and were flagged "UJ,e." There are several samples that were cancelled due to broken vials.

1.1.2 Initial Calibration

For the VOC analysis, several initial calibration curves were incorrectly calculated by the SEI laboratory (April and May, 2003). These calibration curves and associated results were re-calculated by the laboratory. All positive results from recalculation were slightly less than the original results and corrected results were entered on the Form Is and electronic data deliverable (EDD) by the reviewer.

For the July 7, 2003 TPH analyses, the laboratory did not analyze a daily calibration standard at the beginning of the analytical sequence. Since TPH was not detected in the associated samples, the non-detect results were flagged "S,Q" as screening data.

For the TPH analyses, the initial calibration curve analyzed on instrument 2B on June 19, 2003 displayed a response factor less than the control limit (i.e., 0.990). The laboratory did not re-run the calibration curve. Associated sample results analyzed on Instrument 2B were non-detect and were flagged "UJ,r".

1.1.3 Continuing Calibration

For the July 7, 2003 VOC analyses, no ending continuing calibration verification (CCV) was analyzed on Instrument 4A. The only sample analyzed on Instrument 4A was a non-detect, therefore, no data qualification was necessary.

For the VOC/TPH analyses, several daily initial calibration verification (ICV) and CCVs displayed %Ds greater than the control limit (i.e., $\pm 20\%$). If the %D was greater than 20% with a positive bias, the associated positive field sample results were flagged "J,c". If the %D was greater than 20% with a negative bias, the associated positive field sample results were flagged "J,c" and the associated non-detect field sample results were flagged "UJ,c".

1.1.4 Blanks

For the VOC analyses, the method blank analyzed on June 24, 2003 on Instrument 3A displayed positive detections for tetrachloroethene (PCE) at 12.0 $\mu\text{g/L}$, trichloroethene (TCE) at 3.85 $\mu\text{g/L}$, toluene at 2.03 $\mu\text{g/L}$, ethylbenzene at 3.44 $\mu\text{g/L}$, meta/para-xylene at 7.16 $\mu\text{g/L}$, and ortho-xylene at 3.65 $\mu\text{g/L}$. For all compounds except tetrachloroethene, since the blank concentrations were less than one half of the reporting limit, no data qualifying action was taken. For tetrachloroethene, associated field sample results less than five times the blank concentration were flagged "U,z" at the sample concentration.

For the TPH analyses, the method blank analyzed on January 8, 2004 at 14:45 on Instrument 2A displayed a positive detection at 172 ppb. Associated sample results with positive detections less than five times the amount found in the blank were flagged "U,z".

1.1.5 Surrogates

For the VOC/TPH analyses, samples 16301-C-EX-S-09E20-16.0-S1 (7%) and 16381-C-S-S-09E208968-16.0-S1 (0%) displayed bromofluorobenzene surrogate percent recoveries (%Rs) less than the lower control limit (LCL) (i.e., 75%). These two samples were re-analyzed at a 2x dilution and displayed similar recoveries (5.2% and 30%, respectively). Associated sample results in the original analysis with positive detections were flagged "J,s"; non-detects were flagged "R,s". Surrogate recoveries for bromofluorobenzene were outside the control limit (i.e., 75%-125%) in some samples. If the %R was greater than 125%, the associated positive field sample results were flagged "J,s". If the %R was less than 75%, the associated positive field sample results were flagged "J,s" and the associated non-detect field sample results were flagged "UJ,s".

1.1.6 Matrix Spike/Matrix Spike Duplicate

For the VOC analyses, the MS/MSD pair (10490-C-WS-S-06U066602-40.0-S1) displayed %Rs less than the LCL (i.e., 70%) for trans-1,2-dichloroethene at 0%. The non-detect result in the parent sample was flagged "R,m". Some MS/MSD recoveries were outside the control limits (i.e., 70%-130%). If the %R was greater than 130%, the positive results in the parent samples were flagged "J,m". If the %R was less than 70%, the positive results in the parent samples were flagged "J,m" and the non-detect sample results were flagged "UJ,m". Three MS/MSD pairs displayed RPDs greater than the control limit (i.e., 30%) for PCE. The positive PCE results in the parent samples were flagged "J,d". Since all LCS recoveries associated with these MS/MSD pairs were in control, no further data qualifying action was taken.

1.1.7 Laboratory Control Samples

The on-Site laboratory uses the daily ICV as an LCS. Several LCS displayed %Rs greater than the upper control limit (UCL) (i.e., 130%). Since the associated field sample results were non-detect, no data qualifying action was taken.

1.1.8 Laboratory Duplicate Samples

Several field duplicate pairs displayed RPDs and/or absolute differences greater than the control limit (i.e., 100% or 2x reporting limit) for the VOC or TPH analyses. Associated sample results with positive detections were flagged "J,Q" or "J,k"; non-detects were flagged "UJ,Q unless previously flagged due to other anomalies.

1.1.9 Compound Identification

For the TPH analysis, the complete analytical run time requires 11 minutes. The normal run time for VOC/TPH analyses was 6.75 minutes (prior to May 5, 2003). The gas chromatogram (GC) was monitored by the analyst. If evidence of TPH is present within a normal run time, sample will be re-analyzed using a modified GC program that extends out to 11 minutes for better quantitation. Since the TPH elution pattern cannot be completely evaluated, all TPH results should be considered as screening data and were flagged "S,Q". The data user should use these TPH data with caution. After May 5, 2003, the analytical run time was extended to 9 minutes, an adequate time in which the majority of the TPH chromatograms can be evaluated. These TPH results should be considered usable for their intended purpose.

Several individual peaks were detected in the TPH's diesel range in the Cell 14 and Cell 9 samples. Since these peak fingerprint pattern did not match with the diesel standard, the peak areas were not used to calculate the TPH concentration. The peak pattern was also compared with other standards, such as gasoline, hydraulic fluid, and mineral spirit. None of them matched with the pattern in the Cell 14 and Cell 9 samples. Several samples were selected and sent to STL for VOC and SVOC analyses, including tentatively identified compounds (TICs). Most of the TICs detected were unknown. Therefore, no definite conclusion can be made about these unidentified peaks in some of the Cell 14 and Cell 9 samples. The data user should be aware of these potential contaminations and should use the data with caution.

1.1.10 Compound Quantitation

Some VOC and TPH results exceeded the linear range of the calibration curve. These results were flagged "J,q" by the reviewer. Most of these samples were diluted and reanalyzed by the laboratory. The results from the dilution analysis were reported with a "D" flag and should be used for data interpretation.

1.1.11 Field Duplicate

Several field duplicate pairs displayed RPDs and/or absolute differences greater than the control limit (i.e., 100% or 2x reporting limit) for the VOC or TPH analyses. Associated sample results with positive detections were flagged "J,f"; non-detects were flagged "UJ,f" unless previously flagged due to other anomalies.

1.2 On-Site Gamma Spectroscopy Analysis

The following were evaluated:

- Data Package Completeness;
- * • Test Methods;
- Sample Receipt and Preparation;
- Holding Times;
- Initial Calibration;
- * • Continuing Calibration;
- Blanks;
- * • Weekly Control Samples;
- Internal Duplicates;
- Minimum Detectable Activity;
- Quantitation; and
- Field Duplicates.

1.2.1 Data Package Completeness

The chain-of-custody records and sample preparation information were not provided in the daily radiological data packages. Therefore, this information was not evaluated during the data validation process. The sample completeness was monitored by laboratory instrument run logs and GTEOSI sample tracking master file. All other information was provided in the daily data package.

1.2.2 Sample Receipt and Preparation

There are 16 samples that were not received for analysis due to various reasons (see below):

Barcode ID	Date	Comment
00046-R-CF-S-01W04-08.0-S1	5/5/03	Lost
00075-R-WS-S-01U070051-12.0-S1	--	Not collected
00775-R-WS-P-02U08-02.0-S1	6/17/03	Not made in sample prep. Area
01984-R-BG-S-111PIT-01.0-S1-DP	7/18/03	Not made in sample prep. Area
02050-R-EX-S-02V11-15.0-S1	7/21/03	Lost
03332-R-WS-S-07M222138-01.0-S1-DP	8/13/03	Lost. Try to remake from 6/9/04 S3, not enough sample.
04952-R-CF-S-13D24WW-01.5-S1	9/22/03	Not enough sample
04959-R-CF-S-13D24A-05.0-S1	9/22/03	Not representative CV sample, not analyzed.
04960-R-CF-S-13D24B-05.5-S1	9/22/03	
04963-R-CF-S-13D24D-04.5-S1	9/22/03	
04964-R-CF-S-13D24FN-04.5-S1	9/22/03	
10965-R-DL-S-11N19DL03-36.0-S1-DP	3/10/04	Not enough sample.
17091-R-DL-S-09D19DL04-09.0-S1	8/2/04	Exclude. To re-drill at different location.
17092-R-DL-S-09D19DL04-10.0-S1	8/2/04	
17099-R-DL-S-09D19DL04-11.0-S1	8/2/04	
17234-R-SP-S-09G21DL06-38.0-S1	8/11/04	Exclude. Back to waste stream for greater depth

1.2.3 Holding Times

The analytical holding times (i.e., 180 days) were exceeded in several on-Site radiological samples. Positive field sample results were flagged "J,h" and non-detect field sample results were flagged "UJ,h".

1.2.4 Initial Calibration

In the annual efficiency calibration analyzed on detector 601 (4/30/03), cesium-137 (¹³⁷Cs) displayed a positive deviation greater than the control limit (i.e., 5%) at 7.01% and 5.88. Positive ¹³⁷Cs results were flagged "J, c" in the associated samples.

1.2.5 Blanks

A method blank was not prepared along with the associated field samples. As such, the level of laboratory contamination cannot be assessed by the reviewer. The data user should be aware of potentially biased high or false positive sample results due to unmeasured laboratory contribution to background levels.

1.2.6 Laboratory Duplicates

Most of the laboratory duplicate pairs displayed RPD and/or absolute difference greater than the control limit (i.e., 50% or 2x MDA). Associated sample results with positive detections were flagged "J, k"; non-detects were flagged "UJ,k" unless previously flagged due to the annual efficiency calibration anomaly.

1.2.7 Minimum Detectable Activity

Some positive radium-226 (²²⁶Ra) results were reported without an MDA due to the failing of the sensitivity test and/or a peak shape test. Positive ²²⁶Ra results were flagged "R, Q". Most of the ²²⁶Ra results were not reported due to chromatography that displayed poor shape (failed a peak shape test).

Appendix D

Page 9 of 34

Revision 6-10-05

Most of protactinium-234m (^{234m}Pa), thorium-231 (^{231}Th), and thorium-234 (^{234}Th) nuclides in each sample had the MDA greater than the MDA (0.2 pCi/g) specified in the QAPP. Several nuclides displayed results less than the MDA. These results were crossed out by the data reviewer and a "<" sign was manually added.

1.2.8 Quantitation

Some positive results were calculated using chromatography that displayed poor peak shape (denoted with "#" in front of the result). These results, except those previously flagged due to other anomalies, should be considered as estimated and were flagged "J, Q₁".

Some nuclide results displayed a total uncertainty greater than the control limit of 100%. These results, except those previously flagged due to other anomalies, were flagged "J, Q₂".

1.2.9 Field Duplicates

Most of the field duplicate pairs had nuclides displaying RPD and/or absolute difference greater than the control limit (i.e., 100% or 2x MDA). Associated sample results with positive detections were flagged "J,f"; non-detects were flagged "UJ,f" unless previously flagged due to other anomalies.

1.3 Volatile Organic Compounds - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- * • Sample Receipt and Preparation;
- Holding Times;
- * • GC/MS Tune;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Surrogates;
- Matrix Spike/Matrix Spike Duplicate;
- Laboratory Control Samples;
- Internal Standards;
- * • Compound Identification;
- * • Compound Quantitation;
- Tentatively Identified Compounds;
- Field Blanks/Trip Blanks; and
- Field Duplicates.

1.3.1 Holding Times

The following are details regarding the preservation and holding time for the field sample results analyzed for VOCs:

<u>Matrix</u>	<u>Preserved</u>	<u>Aromatic</u>	<u>All others</u>
Aqueous	No/Yes	7 days/14 days	14 days
Solid	4°C ± 2°C	14 days	14 days

If holding times were exceeded, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “UJ,h”. If the holding time was exceeded greater than two times the holding time criterion, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “R,h”.

1.3.2 Initial Calibration

Initial calibration data are used to assess the linearity of detector response versus analyte concentration and to ensure measurements produce accurate results. The initial calibration compounds are required to meet the RRF criteria of 0.05 and the %RSD criteria of 15% or a correlation coefficient (r) greater than 0.995.

Compounds which displayed the RRF less than the criteria of 0.05 were flagged “J, c” (positive results) and “R,c” (non-detect results) in the associated field samples.

The associated positive field sample results which displayed %RSDs greater than the control limit of 15% or correlation coefficients less than 0.995 were flagged “J,r”. The associated non-detect field sample results which displayed %RSDs greater than the control limit or correlation coefficients less than the criteria were flagged “UJ,r”. If a %RSD was greater than 90%, positive results were flagged “J,r” and non-detect results were flagged “R,r”.

1.3.3 Continuing Calibration

A continuing calibration standard was analyzed at the beginning of each day, every 10 samples, and at the end of the run. The continuing calibration compounds are required to meet RRF criteria of 0.05 and the %D criteria of 20%.

Compounds which displayed the RRF less than the criteria of 0.05 were flagged “J,c” (positive results) and “R,c” (non-detect results) in the associated field samples.

If the %D was greater than 20% with a positive bias, the associated positive field sample results were flagged “J,c”. If the %D was greater than 20% with a negative bias, the associated positive field sample results were flagged “J,c” and the associated non-detect field sample results were flagged “UJ,c”. If the %D was greater than 90%, the associated positive sample results were flagged “J,c” and non-detect sample results were flagged “R,c”.

1.3.4 Blanks

Blanks were used to measure possible contamination from sampling activities, shipping, and the laboratory analytical process. Field contamination was evaluated through the use of equipment blanks. Method blanks were used to assess possible false positives due to contaminants introduced by laboratory procedures and equipment. A method blank must be analyzed for each set of samples or every 20 samples of a similar matrix.

If the laboratory method blanks contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,z" if the concentration for the sample result was less than five times the concentration found in the blank (less than 10 times the concentration for common laboratory contaminants). If the field sample result reported was less than the reporting limit, the result was manually altered to reflect a non-detect at the reporting limit.

1.3.5 Surrogates

Organic data accuracy was judged on an individual sample basis by System Monitoring Compound (SMC) recoveries. SMCs are intended to represent the entire suite of analyzed compounds with similar chemical/physical characteristics.

The following criteria were used to qualify the field sample results with surrogate %Rs greater than the UCL or less than the LCL:

	<u>>UCL</u>	<u>25% to LCL</u>	<u><25%</u>
Positive	J,s	J,s	J,s
Non-detect	None	UJ,s	R,s

1.3.6 Matrix Spike/ Matrix Spike Duplicate

An MS is an aliquot of a sample fortified with known quantities of specific compounds which is subjected to the entire analytical procedure in order to evaluate the appropriateness of the method for the matrix and the presence of possible matrix effects by measuring the accuracy of the recovery. Analytical precision was assessed by the analysis of a MSD sample and calculation of the RPD between the MS and MSD recoveries.

Compounds which displayed %Rs outside of the criteria of 75-125% were qualified. Parent sample results associated with %Rs greater than 125% were flagged "J,m". Parent sample results associated with the %Rs less than 75% required positive results to be flagged "J,m" and non-detect results to be flagged "UJ,m". If the %Rs were less than 10%, all associated field sample results were flagged "J,m" (positive) and "R,m" (non-detect). For all analytes with sample concentrations less than four times the spike concentration, all spike %Rs must meet the criteria of 75-125%. No data qualifying action was taken to analytes with concentrations greater than four times the spike concentration.

1.3.7 Laboratory Control Sample

An LCS is similar to a matrix spike sample; however, the spiked material is either clean laboratory water or clean sand, depending on the matrix of the samples being analyzed.

If an LCS %R was outside the criteria, the associated compounds were qualified as follows:

	<u>>UCL</u>	<u><LCL</u>
Positive	J,l	J,l
Non-detect	None	R,l

1.3.8 Internal Standards

Internal standards are compounds added to the sample extract before analysis in order to monitor system performance on a sample basis. These compounds are also used to quantitate target compounds. The internal standard area counts and retention times were evaluated to measure system stability.

If an internal standard area count for a sample or blank was outside the criteria the following qualification occurred:

	<u>Area > 200%</u>	<u>Area >25% but < 50%</u>	<u>Area <25%</u>
Positive	J,n	J,n	J,n
Non-detect	None	UJ,n	R,n.

1.3.9 Tentatively Identified Compounds

If a TIC was reported from a sample, the TIC was qualified with a laboratory flag of "NJ" and a validation flag of "NJ,t". If a TIC displayed a common laboratory contaminate (i.e., carbon dioxide, siloxanes, hexane, aldol condensation products, solvent preservatives, or related byproducts) the TIC was flagged "R,w". If a method blank contained a TIC and the concentration in the associated sample was less than five times the blank concentration, the TIC was flagged "U,z". If the concentration was greater than five times the blank concentration, no data qualifying action was taken.

1.3.10 Field Blanks/Trip Blanks

The qualification for field blanks/trip blanks was similar to the method blank qualification. The trip blank vial was a sealed vial analyzed to measure the possible contamination from sampling activities, shipping, and the laboratory analytical process.

If the trip blank contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,y" if the concentration for the sample result was less than five times the concentration found in the blank (less than 10 times the concentration for common laboratory contaminants). If the field sample result reported was less than the reporting limit, the result was manually altered to reflect a non-detect at the reporting limit.

1.3.11 Field Duplicates

Field duplicates provide a measure of the overall field sampling and laboratory analytical precision. The results may have greater variability than laboratory duplicate analysis alone, as laboratory duplicate analysis measures only intra-laboratory and analytical method precision.

If a field duplicate was submitted for the VOC analyses and there were any positive results detected in both samples, an RPD was calculated when both results were greater than five times the reporting limit. The RPD must meet the criteria of 50% RPD for aqueous samples and 100% RPD for soil samples. If the sample results were less than five times the reporting limit, a control limit of two times the reporting limit was used. If the criteria were not met, positive field sample results were flagged "J,f" and non-detect results were flagged "UJ,f".

1.4 Semivolatile Organic Compounds - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- * • Sample Receipt and Preparation;
- Holding Times;
- * • GC/MS Tune;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Surrogates;
- Matrix Spike/Matrix Spike Duplicate;
- Laboratory Control Samples;
- Internal Standards;
- * • Compound Identification;
- * • Compound Quantitation;
- Tentatively Identified Compounds;
- Field Blanks/Trip Blanks; and
- Field Duplicates.

1.4.1 Holding Times

The following are details regarding the preservation and holding time for the field sample results analyzed for SVOCs:

<u>Matrix</u>	<u>Extraction</u>	<u>Analysis</u>
Aqueous	7 days	40 days
Solid	14 days	40 days.

If holding times were exceeded, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "UJ,h". If the holding time was exceeded greater than two times the holding time criteria, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "R,h".

1.4.2 Initial Calibration

The initial calibration compounds are required to meet the RRF criteria of 0.05 and the %RSD criteria of 15% or a correlation coefficient (r) greater than 0.995.

The associated positive field sample results which displayed %RSD greater than the control limit of 15% or an r less than 0.995 were flagged "J,r". The associated non-detect field sample results which displayed %RSDs greater than the control limit or r less than the criteria were flagged "UJ,r". If a %RSD was greater than 90%, positive results were flagged "J,r" and non-detect results were flagged "R,r".

1.4.3 Continuing Calibration

The continuing calibration compounds are required to meet the RRF criteria of 0.05 and the %D criteria of 20%.

Compounds which displayed the RRF less than the criteria of 0.05 were flagged "J,c" (positive results) and "R,c" (non-detect results) in the associated field samples.

If the %D was greater than 20% with a positive bias, the associated positive field sample results were flagged "J,c". If the %D was greater than 20% with a negative bias, the associated positive field sample results were flagged "J,c" and the associated non-detect field sample results were flagged "UJ,c". If the %D was greater than 90%, the associated positive sample results were flagged "J,c" and non-detect sample results were flagged "R,c".

1.4.4 Blanks

If the laboratory method blanks contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,z" if the concentration for the sample result was less than five times the concentration found in the blank (less than 10 times the concentration for phthalate-esters). If the field sample result reported was less than the reporting limit, the result was manually altered to reflect a non-detect at the reporting limit.

1.4.5 Surrogates

The following criteria were used to qualify the field sample results with surrogate %Rs greater than the UCL or less than the LCL:

	<u>>UCL</u>	<u>25% to LCL</u>	<u><25%</u>
Positive	J,s	J,s	J,s
Non-detect	None	UJ,s	R,s

1.4.6 Matrix Spike/ Matrix Spike Duplicate

Compounds which displayed %Rs outside of the criteria of 75-125% were qualified. Parent sample results associated with %Rs greater than 125% were flagged "J,m". Parent sample results associated with the %Rs less than 75% required positive results to be flagged "J,m" and non-detect results to be flagged "UJ,m". If the %Rs were less than 10%, all associated field sample results were flagged "J,m" (positive) and "R,m" (non-detect). For all analytes with sample concentrations less than four times the spike concentration, all spike %Rs must meet the criteria of 75-125%. No data qualifying action was taken to analytes with concentrations greater than four times the spike concentration.

1.4.7 Laboratory Control Sample

If an LCS %R is outside the criteria, the associated compounds were qualified as follows:

	<u>>UCL</u>	<u><LCL</u>
Positive	J,l	J,l
Non-detect	None	R,l

1.4.8 Internal Standards

If an internal standard area count for a sample or blank was outside the criteria the following qualification occurred:

	<u>Area > 200%</u>	<u>Area >25% but < 50%</u>	<u>Area <25%</u>
Positive	J,n	J,n	J,n
Non-detect	None	UJ,n	R,n.

1.4.9 Tentatively Identified Compounds

If a TIC was reported from a sample, the TIC was qualified with a laboratory flag of "NJ" and a validation flag of "NJ,t". If a TIC displayed a common laboratory contaminate (i.e., carbon dioxide, siloxanes, hexane, aldol condensation products, solvent preservatives, or related byproducts) the TIC was flagged "R,w". If a method blank contained a TIC and the concentration in the associated sample was less than five times the blank concentration, the TIC was flagged "U,z". If the concentration was greater than five times the blank concentration, no data qualifying action was taken.

1.4.10 Field Blanks/Trip Blanks

If the trip blank contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,y" if the concentration for the sample result was less than five times the concentration found in the blank (less than 10 times the concentration for phthalate-esters). If the field sample result reported was less than the reporting limit, the result was manually altered to reflect a non-detect at the reporting limit.

1.4.11 Field Duplicates

If a field duplicate was submitted and there were any positive results detected in both samples; an RPD was calculated when both results were greater than five times the reporting limit. The RPD must meet the criteria of 50% RPD for aqueous samples and 100% RPD for soil samples. If the sample results were less than five times the reporting limit, a control limit of two times the reporting limit was used. If the criteria were not met, positive field sample results were flagged "J,f" and non-detect results were flagged "UJ,f".

1.5 Pesticide, PCBs, and Herbicides Compounds - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- * • Sample Receipt and Preparation;
- Holding Times;
- * • GC/ECD Instrument Performance Check;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Surrogates
- Matrix Spike/Matrix Spike Duplicates;
- Laboratory Control Samples;

- Compound Identification;
- * • Compound Quantitation;
- Field Blanks; and
- Field Duplicates.

1.5.1 Holding Times

The following are details regarding the preservation and holding time to analysis for the field sample results analyzed for pesticides, polychlorinated biphenyls (PCBs), and herbicides:

<u>Matrix</u>	<u>Extraction</u>	<u>Analysis</u>
Aqueous	7 days	40 days
Solid	7 days/14 days (Herbicides)	40 days.

If holding times were exceeded, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “UJ,h”. If the holding time was exceeded greater than two times the holding time criteria, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “R,h”.

1.5.2 Initial Calibration

The initial calibration compounds are required to meet the %RSD criteria of 20% or an r greater than 0.995.

The associated positive field sample results which displayed %RSDs greater than the control limit of 20% or r less than 0.995 were flagged “J,r”. The associated non-detect field sample results which displayed %RSDs greater than the control limit or r less than the criteria were flagged “UJ,r”. Potential false negatives were flagged “R,r” by use of professional judgment. For the herbicide analyses, if the %RSD was greater than 90%, the associated positive field sample results were flagged “J,r” and the associated non-detect field sample results were flagged “R,r”.

1.5.3 Continuing Calibration

For the pesticide/PCB analyses, the continuing calibration compounds are required to meet the %D criteria of 15%.

If one column displayed a %D greater than 15%, the associated positive field sample results were flagged “J,c”. If both columns displayed %Ds greater than 15%, the associated positive field sample results were flagged “J,c” and the associated non-detect field sample results were flagged “UJ,c”.

For the herbicide analyses, the continuing calibration compounds are required to meet the following %D criteria:

	<u>>25% but <50%</u>	<u>>50% but < 100%</u>
One column	J,c (+)	NJ,c (+)
Two columns	J,c (+) UJ,c (-)	NJ,c (+) UJ,c (-).

If the %D was >100% the associated positive results were flagged “J,c” and non-detect results were flagged “R,c”.

1.5.4 Blanks

If the laboratory method blanks contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,z" if the concentration for the sample result was less than five times the concentration found in the blank

1.5.5 Surrogates

For the pesticide/PCB analyses, the following criteria were used to qualify the field sample results with surrogate %Rs greater than the UCL or less than the LCL:

	<u>>UCL</u>	<u>25% to LCL</u>	<u><25%</u>
Positive	J,s	J,s	J,s
Non-detect	None	UJ,s	R,s

For the herbicide analyses, the following criteria were used to qualify the field sample results with surrogate %Rs greater than the UCL or less than the LCL:

	<u>>UCL</u>	<u>10% to LCL</u>	<u><10%</u>
Positive	J,s	J,s	J,s
Non-detect	None	UJ,s	R,s

1.5.6 Matrix Spike/ Matrix Spike Duplicate

Compounds which displayed %Rs outside of the criteria of 75-125% were qualified. Parent sample results associated with %Rs greater than 125% were flagged "J,m". Parent sample results associated with the %Rs less than 75% required positive results to be flagged "J,m" and non-detect results to be flagged "UJ,m". If the %Rs were less than 10%, all associated field sample results were flagged "J,m" (positive) and "R,m" (non-detect). For all analytes with sample concentrations less than four times the spike concentration, all spike %Rs must meet the criteria of 75-125%. No data qualifying action was taken to analytes with concentrations greater than four times the spike concentration.

If MS/MSD recoveries do not meet criteria, but the LCS recoveries for the same compounds are acceptable, only the parent sample was qualified. If the LCS recoveries also displayed recoveries outside the criteria, all associated samples are qualified.

1.5.7 Laboratory Control Sample

If an LCS %R was outside the criteria, the associated compounds were qualified as follows:

	<u>>UCL</u>	<u><LCL</u>
Positive	J,l	J,l
Non-detect	None	R,l

1.5.8 Compound Identification

For the pesticide/PCB analyses, the retention times of each reported compound must fall within the retention time window from the daily calibration. TCX must be within ± 0.05 minutes and the DCB must be within ± 0.10 minutes of the mean retention time determined from the initial calibration.

For the herbicide analyses, positive results reported between columns should have an RPD less than 25%. If the criteria were not met and there was no interference on either column, the following qualifications occurred:

<u>>25% but < 50%</u>	<u>>50% but < 90%</u>	<u>>90%</u>
J	NJ	R

If there was interference on either column the positive field sample results were flagged "NJ".

1.5.9 Field Blanks

The qualification for field blanks was similar to the method blank qualification. If the field blank contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "U,x" if the concentration for the sample result was less than five times the concentration found in the field blank. If the field sample result reported was less than the reporting limit, the result was manually altered to reflect a non-detect at the reporting limit.

1.5.10 Field Duplicates

If a field duplicate was submitted for the analyses and there were any positive results detected in both samples, an RPD was calculated when both results were greater than five times the reporting limit. The RPD must meet the criteria of 50% RPD for aqueous samples and 100% RPD for soil samples. If the sample results were less than five times the reporting limit, a control limit of two times the reporting limit was used. If the criteria were not met, positive field sample results were flagged "J,P" and non-detect results were flagged "UJ,f".

1.6 Metals - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- * • Sample Receipt and Preparation;
- Holding Times;
- Instrument Calibration;
- Blanks;
- Laboratory Control Samples;
- Matrix Spike/Matrix Spike Duplicates;
- Laboratory Duplicates;
- ICP Serial Dilution Analysis;
- * • Quantitation;
- * • Field Blanks; and

- Field Duplicates.

1.6.1 Holding Times

The following are details regarding the preservation and holding time for the field sample results analyzed for the metals analyses:

<u>Matrix</u>	<u>Analysis</u>
Mercury	28 days
Cyanide	14 days
Other Metals	6 months.

If holding times were exceeded, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “UJ,h”. If the holding time was exceeded greater than two times the holding time criteria, positive field sample results were flagged “J,h” and non-detect field sample results were flagged “R,h”.

1.6.2 Instrument Calibration

Initial calibration data are used to assess the linearity of detector response versus analyte concentration and to ensure measurements produce accurate results. The instrument must be calibrated daily or once every 24 hours, and each time the instrument is set up. The following criteria must be met:

<u>Analysis</u>	<u>Criteria</u>
ICP/ICP-MS	A blank and one standard
GFAA	A blank and three standards
CVAA	A blank and five standards.

The correlation coefficients must be greater than 0.995. If not, associated positive field samples were flagged “J,r” and associated non-detect field samples were flagged “UJ,r”.

An ICV must be analyzed at the beginning of each analyses. A CCV must be performed every 10 analyses or every 2 hours. If not, professional judgment was used to determine the effect on data usability.

If the recovery criteria were not met for the ICV and CCV, the data were qualified as follows:

	<u>R,c (+, -)</u>	<u>J,c (+)/ UJ,c (-)</u>	<u>J,c (+)</u>	<u>R,c (+)</u>
Mercury	<64%	65-79%	121-135%	>136%
Other Metals	<74%	75-89%	111-125%	>126%
Cyanide	<69%	70-84%	116-130%	>131%.

The CRDL %R must fall within 80-120%. The qualification criteria are as follows:

	<u>50-79%</u>	<u><50%</u>	<u>121-150%</u>	<u>>150%</u>
Positive	J,w	R,w	J,w	R,w
Non-detect	UJ,w	R,w	None	None.

1.6.3 Blanks

A preparation blank was prepared at one per 20 samples, per batch, per matrix, or per level.

The preparation blank, initial calibration blank, and continuing calibration blanks were normally less than the reporting limit, and no data qualifying action was taken.

1.6.4 Laboratory Control Sample

If an LCS %R was outside the criteria (Aqueous and TCLP limits= 80-120%, soil limits= laboratory generated limits) the associated compounds were qualified as follows:

Aqueous/TCLP

<u><50%</u>	<u>50-79%</u>	<u>121-150%</u>	<u>>150%</u>
R,l (+/-)	J,l (+)/ UJ,l (-)	J,l (+)	R,l (+).

Soil

<u><LCL</u>	<u>>UCL</u>
J,l(+)/UJ,l(-)	J,l(+).

1.6.5 Matrix Spike/ Matrix Spike Duplicate

For all analytes with sample concentrations less than four times the spike concentration, all spike %Rs must meet the criteria of 75-125%. No data qualifying action was taken to analytes with concentrations greater than four times the spike concentration. If the criteria were not met, the following data qualifying action was taken:

Water	<u>≥150%</u>	<u>>126% but < 150%</u>	<u>>30% but <74%</u>	<u>≤ 30%</u>
Positive	R,m	J,m	J,m	J,m
Non-detect	None	None	UJ,m	R,m.
Soil	<u>≥200%</u>	<u>>126% but <200%</u>	<u>> 10% but < 74%</u>	<u>≤ 10%</u>
Positive	R,m	J,m	J,m	J,m
Non-detect	None	None	UJ,m	R,m.

1.6.6 Laboratory Duplicates

If a laboratory duplicate was not analyzed one per 20 samples, per batch, per matrix, or per level, the associated positive field sample results were flagged "J,k".

The following laboratory duplicate criteria must be met:

For sample results greater than five times the reporting limit (RL), the RPD must be less than 20% for aqueous samples and 35% for solid samples. If the RPD was greater than 20% for aqueous samples or 35% for soil samples, the associated positive field sample results were flagged "J,k". For sample results that are less than five times the RL, an absolute difference must be calculated and the control limit of two times the RL is used. If the absolute difference between the two results was greater than two times the RL, the associated positive field sample results were flagged "J,k".

1.6.7 ICP Serial Dilution Analyses

The serial dilution of samples quantitated by ICP determines whether or not significant physical or chemical interferences exist due to sample matrix.

If the analyte concentration is sufficiently high (greater than 50 times the IDL), the serial dilution (a five-fold dilution) must agree within a 10% difference. If this criteria was not met, all associated positive field sample results were flagged "J,s".

1.6.8 Field Duplicates

If a field duplicate was submitted for the analyses and there were any positive results detected in both samples; an RPD was calculated when both results were greater than five times the reporting limit. The RPD must meet the criteria of 50% RPD for aqueous samples and 100% RPD for soil samples. If the sample results were less than five times the reporting limit, a control limit of two times the reporting limit was used. If the criteria were not met, positive field sample results were flagged "J,f" and non-detect results were flagged "UJ,f".

1.7 Alpha Spectroscopy Analysis - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Data Package Completeness;
- * • Test Methods;
- * • Sample Receipt and Preparation;
- * • Holding Times;
- * • Monthly Calibration;
- * • Daily Calibration;
- Blanks;
- Laboratory Control Samples;
- Tracer Recovery;
- Laboratory Duplicates;
- Quantitation;
- * • Field Blanks; and
- Field Duplicates.

1.7.1 Holding Times

The following are details regarding the preservation and holding time for the field sample results analyzed for the alpha-spectroscopy analyses:

Aqueous samples collected without preservation should be sent to the laboratory within five days and preserved in the original container for a minimum of 16 hours before analysis or transfer of the sample.

If holding times were exceeded, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "UJ,h". If the holding time was exceeded greater than two times the holding time criteria, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "R,h".

1.7.2 Blanks

If the laboratory method blanks contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged "J,p" if the concentration for the sample result was less than five times the concentration found in the blank.

1.7.3 Laboratory Control Samples

If an LCS %R is outside the criteria the associated compounds were qualified as follows:

$$\begin{array}{ccc} \frac{>UCL}{J,l} & \frac{10\%-LCL}{J,l (+) UJ,l (-)} & \frac{\leq 10\%}{J,l (+) R,l (-)} \end{array}$$

1.7.4 Tracer Recovery

A tracer is used to measure and correct for losses that may have occurred during separation and quantification of the analyte (in a specific sample). Abnormally high or low recoveries may be indicative of inappropriate separation methods for certain matrix interferences, instrument problems, calibration errors, or errors in the preparation of the tracer. The tracer recovery acceptance limits are 45-105%.

If these requirements were not met in the associated field samples or method blanks, the positive field sample results were flagged "J,w" and the associated non-detect field sample results were flagged "UJ,w".

1.7.5 Laboratory Duplicates

The matrix duplicate replicate error ratio (RER) result must meet the criteria of two for both aqueous and soil samples if both results were greater than five times minimum detectable concentration (MDC). If one or both results were less than five times MDC a control limit of plus or minus two times MDC was used.

When the criteria were not met, the associated positive field sample results were flagged "J,k" and associated non-detect field sample results were flagged "UJ,k".

1.7.6 Quantitation

The objective is to ensure that the reported quantitation results are accurate and that the required detection limits have been met. When detection limit requirements are not met, the data quality objectives may not have been met. All results were evaluated relative to the uncertainty associated with the analysis.

The counting time, sample volume, and MDC must meet the project requirements. (1 pCi/L for aqueous samples and 0.4 pCi/g for solid samples).

The non-detect field sample results for this project were not displayed at the MDC. All non-detect field sample results which displayed values less than the MDC were manually raised to the MDC by the data reviewer and were flagged "U,Q1".

If the reported uncertainty of a sample was greater than the sample result itself, the associated positive field sample result was flagged "J,Q2" and the associated non-detect field sample result was flagged "UJ,Q2".

1.7.7 Field Duplicates

The matrix duplicate RER result must meet the criteria of two for both aqueous and soil samples if both results were greater than five times the MDC. If one or both results were less than five times the MDC, a control limit of plus or minus two times the MDC was used.

When the criteria were not met, the associated positive field sample results were flagged "J,P" and the associated non-detect field sample results were flagged "UJ,P". The frequency of the field duplicates (4.3%) was not met as specified in the QAPP (i.e., 5%). None of the data were rejected due to field duplicate imprecision. In general terms for the soil data, the data appear to be acceptable. However, some data points displayed evidence of excessive variability in these duplicates.

1.8 Gamma Spectroscopy Analysis - Severn Trent Laboratories, Inc.

The following were evaluated:

- * • Test Methods;
- * • Sample Receipt and Preparation;
- * • Holding Times;
- Initial Calibration;
- Continuing Calibration;
- Blanks;
- Laboratory Control Samples;
- * • Matrix Spike/Matrix Spike Duplicates;
- Laboratory Duplicates;
- * • Quantitation;
- * • Field Blanks; and
- Field Duplicates.

1.8.1 Holding Times

The following are details regarding the preservation and holding time for the field sample results analyzed for the alpha-spectroscopy analyses:

Aqueous samples collected without preservation should be sent to the laboratory within five days and preserved in the original container for a minimum of 16 hours before analysis or transfer of the sample.

If holding times were exceeded, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "UJ,h". If the holding time was exceeded greater than two times the holding time criteria, positive field sample results were flagged "J,h" and non-detect field sample results were flagged "R,h".

1.8.2 Initial Calibration

The energy versus channel calibration must be established for spectroscopy systems monthly for gamma spectroscopy or when the daily performance check indicates an unacceptable change in energy gain or zero offset. The energy difference must be less than 0.1 keV for all points or within 0.0005 of the energy

keV for at least ten points. If the criteria are not met, the associated positive field sample results were flagged “J,r” and the associated non-detect field sample results were flagged “UJ,r”.

The resolution versus energy channel must be established for spectroscopy systems monthly for gamma spectroscopy or when the daily performance check indicates an unacceptable change in energy gain or zero offset. The full width at half maximum (FWHM) must be less than 3.0 keV at 1332 keV. The FWHM difference should be less than 0.500 keV for all points. If the criteria are not met, the associated positive field sample results were flagged “J,r” and associated non-detect field sample results were flagged “UJ,r”.

The efficiency versus energy curves must be established for gamma spectroscopy systems for the energy region of interest with particular attention to energy regions where the efficiency depends strongly on energy. The efficiency for all points should have a percent difference of less than 5%. If the criteria are not met, the associated positive field sample results were flagged “J,r” and the associated non-detect field sample results were flagged “UJ,r”.

The spectroscopy system background determinations are established quarterly or when the routine performance check indicates an unacceptable change in system background. If the criteria are not met, the associated positive field sample results were flagged “J,r” and associated non-detect field sample results were flagged “UJ,r”.

1.8.3 Continuing Calibration

A daily instrument calibration standard must be analyzed for each instrument used. Within the daily calibration verification, the peak energy, efficiency, resolution and backgrounds are monitored using 2σ or 3σ as control limits. If one of the above mentioned falls within the 2σ or 3σ range it was deemed acceptable at an investigative level. If 3σ was exceeded, the associated positive field sample results were flagged “J,c” and the associated non-detect field sample results were flagged “UJ,c”.

1.8.4 Blanks

If the laboratory method blanks contained detectable target compounds and the associated samples had detectable concentrations of these same compounds, the positive field sample results were flagged “J,p” if the concentration for the sample result was less than five times the concentration found in the blank.

1.8.5 Laboratory Control Samples

The sample results were qualified based on the following criteria:

$$\begin{array}{ccc} \frac{>UCL}{J,l} & \frac{10\%-LCL}{J,l (+) UJ,l (-)} & \frac{\leq 10\%}{J,l (+) R,l (-)} \end{array}$$

1.8.6 Laboratory Duplicates

The matrix duplicate RER result must meet the criteria of two for both aqueous and soil samples if both results were greater than five times the MDC. If one or both results were less than five times the MDC a control limit of plus or minus two times the MDC was used.

When the criteria were not met, the associated positive field sample results were flagged "J,k" and associated non-detect field sample results were flagged "UJ,k".

1.8.7 Quantitation

The objective is to ensure that the reported quantitation results are accurate and that the required detection limits have been met. When detection limit requirements are not met, the data quality objectives may not have been met. All results were evaluated relative to the uncertainty associated with the analysis.

The counting time, sample volume, and MDC must meet the project requirements. (1 pCi/L for aqueous samples and 0.4 pCi/g for solid samples).

The non-detect field sample results for this project were not displayed at the MDC. All non-detect field sample results which displayed values less than the MDC were manually raised to the MDC by the data reviewer and were flagged "U,Q1".

If the reported uncertainty of a sample was greater than the sample result itself, the associated positive field sample result was flagged "J,Q2" and the associated non-detect field sample result was flagged "UJ,Q2".

1.8.8 Field Duplicates

The matrix duplicate RER result must meet the criteria of 2 for both aqueous and soil samples if both results were greater than five times the MDC. If one or both results were less than five times the MDC, a control limit of $\pm 2 \times$ MDC was used.

When the criteria were not met, the associated positive field sample results were flagged "J,f" and associated non-detect field sample results were flagged "UJ,f". The frequency of the field duplicates (4.3%) was not met as specified in the QAPP (i.e., 5%). None of the data were rejected due to field duplicate imprecision. In general terms for the soil data, the data appear to be acceptable. However, some data points displayed evidence of excessive variability in these duplicated.

1.9 Data Quality Indicators (Method Quality Objectives)

This section summarizes the analytical data in terms of its completeness and usability. Data completeness is defined as the percentage of sample results that have been determined to be usable during the data validation process. Major deficiencies in the data generation process result in data being rejected, indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor deficiencies in the data generation process result in some sample data being characterized as approximate or estimate. Identification of a data point as approximate indicates uncertainty in the reported concentration or detection limit of the chemical, but not its assigned identity.

This section provides an assessment of the data in terms of data quality indicators, also known as method quality objectives. These indicators are: precision, accuracy, comparability, completeness, representativeness, and sensitivity.

1.9.1 On-Site Volatile Organic Compounds and Total Petroleum Hydrocarbon data

Between April 30, 2003 and September 30, 2004, 11,482 soil samples were collected from the Site. The samples were forwarded under chain of custody to on-Site SEI Environmental Inc. for analysis of a Site-specific set of VOCs and total petroleum hydrocarbons–diesel range organic (TPHs-DRO). The samples were received under chain of custody, intact, and in good condition.

1.9.1.1 Precision

Precision was measured through the evaluation of field duplicate samples, MS/MSD pair, and laboratory duplicate samples. The laboratory duplicate samples were analyzed per day and per instrument used. There are 494 MS/MSD pairs and 523 field duplicates collected for VOC and TPH analyses. The frequency of MS/MSD pair (4.3%) and field duplicates (4.6%) were not met as specified in the QAPP (i.e., 5%). For the VOC and TPH analyses, none of the data were rejected due to precision non-conformances. In general terms for the soil data, the precision of these data appear to be acceptable. However, some VOC and TPH, 495 data points out of 39 field duplicates (i.e., 7.5%) displayed evidence of excessive variability in these duplicates.

1.9.1.2 Accuracy

The LCS and surrogate recoveries indicate the accuracy of the data. The laboratory control samples were analyzed per day and per instrument used. For the TPH analyses, none of the data were rejected due to accuracy non-conformances. For the VOC and TPH analyses, 1042 data points from 202 field samples (1.8%) should be considered estimates due to surrogate recovery failure. In general terms for the soil data, the accuracy of these data appear to be acceptable.

1.9.1.3 Representativeness

Holding times, sample preservation, blank analysis, and compound quantification are indicators of the representativeness of the analytical data. None of the VOC or TPH data were rejected due to representativeness non-conformances.

1.9.1.4 Comparability

Comparability is not compromised, provided that the analytical methods do not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

1.9.1.5 Completeness

There are only 17 VOC/TPH data points that were rejected due to MS/MSD recovery or surrogate recovery failure. The VOC and TPH data met completeness criteria (i.e., 90%).

1.9.1.6 Sensitivity

Sensitivity is established by reported detection limits that represent measurable concentrations of elements that can be determined with a designated level of confidence. For the soil data, detection limits were elevated due to dilutions in a variety of samples. The data user is cautioned to carefully assess non-detect results in relation to action levels in these cases.

1.9.2 On-Site Gamma Spectroscopy Data

Between April 30, 2003 and September 30, 2004, 12,451 soil samples were collected from the Site for gamma spectroscopy analysis. The samples were forwarded under chain of custody to on-Site gamma spectroscopy service for analysis of a Site-specific set of gamma spectroscopy nuclides. The samples were received under chain of custody, intact, and in good condition, except those discussed in Section 1.2.2.

1.9.2.1 Precision

Precision is measured through the evaluation of field duplicate samples and laboratory duplicate samples. There were 662 field duplicate samples collected for gamma spectroscopy analysis. The frequency of field duplicate analysis (5.3%) met the criteria specified in the QAPP. The laboratory duplicate samples were analyzed per day and per instrument used. For the gamma spectroscopy analyses, none of the data were rejected due to precision non-conformances. The precision of these data appear to be acceptable. However, some gamma spectroscopy data points, displayed evidence of excessive variability in analytical and field duplicates.

1.9.2.2 Accuracy

Weekly LCS recoveries indicate the accuracy of the data. The on-Site gamma spectroscopy service has analyzed the weekly LCS since December 2003. The accuracy of the data before December 2003 cannot be assessed by the reviewer. For the gamma spectroscopy analyses, none of the data were rejected due to accuracy non-conformances. The accuracy of these data appear to be acceptable.

1.9.2.3 Representativeness

Holding times, sample preservation, blank analysis, and compound quantification are indicators of the representativeness of the analytical data. A method blank was not prepared along with the associated field samples. As such, the level of laboratory contamination cannot be assessed by the reviewer. The data user should be aware of potentially biased high or false positive sample results due to unmeasured laboratory contribution to background levels. Several gamma spectroscopy data were flagged as estimate due to holding time violation. None of the gamma spectroscopy data were rejected due to representativeness non-conformances.

1.9.2.4 Comparability

Comparability is not compromised, provided that the analytical methods do not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

1.9.2.5 Completeness

Some positive radium-226 (^{226}Ra) results were reported without a minimum detectable activity (MDA) due to failing the sensitivity test and/or a peak shape test. Positive ^{226}Ra results were flagged "R, Q". Most of ^{226}Ra results were not reported due to chromatography that displayed poor shape (failed a peak shape test). The gamma spectroscopy data met the completeness criteria (i.e., 90%) specified in the QAPP.

1.9.2.6 Sensitivity

Sensitivity is established by reported detection limits that represent measurable concentrations of elements that can be determined with a designated level of confidence. For the soil data, some positive radium-226 (^{226}Ra) results were reported without a MDA due to it's failing the sensitivity test and/or a peak shape test. Most of ^{226}Ra results were not reported due to chromatography that displayed poor shape (failed a peak shape test). Most of protactinium-234m ($^{234\text{m}}\text{Pa}$), thorium-231 (^{231}Th), and thorium-234 (^{234}Th) nuclides in each sample had the MDA greater than the MDA (0.2 pCi/g) specified in the QAPP. Several nuclides displayed results less than the MDA. These results were crossed out by the data reviewer and a "<" sign was manually added. The data user is cautioned to carefully assess non-detect results in relation to action levels in these cases.

1.9.3. Severn Trent Laboratories, Inc. Data

1.9.3.1 Precision

Precision is measured through the evaluation of field duplicate samples, MS/MSD pairs, and laboratory duplicate samples. There were 127 MS/MSD pairs and 128 field duplicates collected for chemistry analyses. The frequency of MS/MSD pairs (5.6%) was met as specified in the QAPP (i.e., 5%). The frequency of the field duplicates (5.5%) was met as specified in the QAPP (i.e., 5%). For the various analyses, none of the data were rejected due to precision non-conformances. In general terms for the soil data, the precision of these data appear to be acceptable. However, some data points, displayed evidence of excessive variability in these duplicates.

1.9.3.2 Accuracy

The LCS and surrogate recoveries indicate the accuracy of the data. The laboratory control samples were analyzed per day and per instrument used. Some analyses were rejected due to accuracy non-conformances. Some data points should be considered estimates due to surrogate recovery failure. In general terms for the soil data, the accuracy of these data appear to be acceptable.

1.9.3.3 Representativeness

Holding times, sample preservation, blank analysis, and compound quantification are indicators of the representativeness of the analytical data. There were 90 data points rejected due to representativeness non-conformances.

1.9.3.4 Comparability

Comparability is not compromised, provided that the analytical methods do not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other known materials to verify their concentrations. Since standard

analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

1.9.3.5 Completeness

There were 3,082 data points rejected due to RRF, MS/MSD, LCS/LCSD, or surrogate recovery failures. The data met the percent completeness criteria (i.e., 90%) at 98.7%.

1.9.3.6 Sensitivity

Sensitivity is established by reported detection limits that represent measurable concentrations of elements that can be determined with a designated level of confidence. For the soil data, detection limits were elevated due to dilutions in a variety of samples. The data user is cautioned to carefully assess non-detect results in relation to action levels in these cases.

1.10 Data Usability Summary Report (DUSR) Summary

The DUSR was performed to determine whether or not the data meet Site-specific criteria for data quality and use. The DUSR is developed by reviewing and evaluating the analytical data package. The following questions were addressed:

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The QAPP required that USEPA Level III deliverables be provided by the laboratory for each data package. This requirement was met as it applies to the methods used by the laboratory for sample analysis. The evaluation of the sample data was completed using the information provided in the data packages provided by the laboratory.

2. Have all holding times been met?

The holding times were met for all the analyses, with few exceptions outlined in Section above.

3. Do all the QC data: blanks, standards, spike recoveries, replicate analyses, and sample data fall within the protocol-required limits and specifications?

The laboratory used the laboratory control limits during the analyses performed for this sampling event. QA/QC deviations and qualifications performed on the sample data are discussed in Section above. Seventeen on-Site VOC/TPH data points were rejected due to MS/MSD recovery or surrogate recovery failure. Some on-Site positive radium-226 (²²⁶Ra) results were reported without a minimum detectable activity (MDA) due to the failing of the sensitivity test and/or a peak shape test. Positive ²²⁶Ra results were flagged "R, Q". Most of the on-Site ²²⁶Ra results were not reported due to chromatography that displayed poor shape (failed a peak shape test). There were 3,082 data points from off-Site laboratories that were rejected due to RRFs, MS/MSD, LCS/LCSD, or surrogate recovery failures.

Some results that were qualified as estimated (“J” and “UJ”) due to QC anomalies should be considered conditionally usable. None of the anomalies of method non-conformances were significant enough to jeopardize the usability of the data.

4. Have all of the data been generated using established and agreed upon analytical protocols?

The QAPP required that USEPA guidance methods be used in the analysis of samples collected for this project. The laboratory used the required method protocols for the analyses performed for this project, which met data user and client needs.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

The evaluation of selected raw data confirmed all information provided in the data packages.

6. Have the correct data qualifiers been used?

The laboratory applied the correct qualifiers to the sample data. The laboratory qualifiers were revised and/or applied as required by validation guidelines listed in Section 1.0.

2.0 DATA MANAGEMENT

Management of laboratory data involves the handling of information associated with sample collection, analytical reporting, data review, and final data presentation and reporting. The goal of laboratory data management is to produce a series of validated databases containing sample results for samples collected during the project. The databases are used to compile, report, and document the results for the Site characterization analyses conducted at the Site. The data management specifications describe the data processing standards, and electronic data pre-loading, loading, and reporting practices. These specifications minimize errors in the compilation of data and provide for an accurate and reliable database. The data management was divided into on-Site and off-Site components to accommodate the varying procedures of each laboratory and the differing locations of data management

2.1 Off-Site Data Management

For the laboratory data deliverables, the storage chosen was Microsoft SQL Server. Microsoft Access was used to process incoming laboratory electronic data deliverables (EDDs), generate QC reports, and update the final validated results and qualifiers. The SQL Server stores the chemical analytical information processed by Microsoft Access.

The laboratory provided the EDD to URS by e-mail and subsequently by CD-ROM; the file contained only final data. The EDD file contained the sample results and analytical methods associated with one data package assigned a sample delivery group (SDG) number by the laboratory.

The URS Data Manager labeled the incoming data file as “original.” The original EDD file was not changed, revised, or otherwise corrected. Changes, if required or revisions to the EDD were made to a copy of the EDD. If the EDD file submitted to URS was incorrect or contained data errors, URS requested a new EDD file to be provided. The laboratory labeled the new file as the same SDG number followed by the words “revised.” All analytical data was submitted in a delimited text file (*.txt).

The URS Data Manager scanned electronically submitted files for viruses using the network anti-virus program. If viruses were detected, they were eradicated before the database was used. The Laboratory Project Manager, QA Manager, and URS Data Manager were notified of the virus. After virus scanning, the files contained in the EDD were copied to the local area network (LAN).

During the loading step, inconsistencies and errors in the data were sought out and corrected to verify a smooth data load. The URS Data Manager evaluated the accuracy of the following prior to data loading:

- Field sample identification numbers;
- Duplicate project samples and corresponding field sample identification;
- Re-extraction data;
- Spelling of synonymous parameter names; and
- Sample collection date.

The URS Data Manager was supported by the Data Validation Group in assessing the accuracy of the information in the incoming EDD file. After completion of loading activities, the URS Data Manager reviewed the loaded file to ensure that the results of the load were accurate.

An electronic copy of the original EDD file, in Microsoft Excel, was sent via e-mail to the data validation personnel for use during the data validation process. The electronic copy contained all the information on the project samples from the original EDD. Upon completion of the data validation task, and peer review, the data validation personnel provided the validation qualifiers to the URS Data Manager using the original electronic copy that was received from the URS Data Manager. The URS Data Manager entered the data validation qualifiers and reasons codes into the electronic database using this copy. The URS Data Manager also forwarded the final results and qualifiers to Destiny Resources of Golden, Colorado, via a secure ftp transfer. The URS Data Manager maintained a summary table of the SDGs received by the laboratory and the status of the validation.

Reports from the database may take on any form requested by the project team. The DRI Data Manager designed a custom report as directed by the Project Manager. The Data Manager was responsible for directing other project team members in accessing the data.

To make efficient use of the database to support decisions, it was important for the end user to know the status and quality (i.e., non-validated, validated) of the data in the database. This was of primary importance if non-validated data have been entered into the database and distributed to project personnel. Therefore, every database report generated indicated the current status and quality of the databases.

2.2 On-Site Data Management

For the laboratory data deliverables, the storage chosen was Microsoft SQL Server. Microsoft Access was used to process incoming laboratory electronic data deliverables (EDDs), generate QC reports, and update the final validated results and qualifiers. The SQL Server stores the radiological and chemical analytical information processed by Microsoft Access.

The laboratory provided the EDD to Destiny Resources of Golden, Colorado (DRI) via the on-Site network; the file contained only final data. The EDD file from SEI contained the sample results and analytical methods associated with one day of analysis by the laboratory. The EDD file(s) from on-Site gamma spectroscopy service contained the sample results associated with one field sample.

The DRI Data Manager was supported by the URS on-Site Data Validation Group in assessing the accuracy of the information in the incoming EDD file(s). The DRI Data Manager provided the URS on-Site Data Validation Group with a daily Excel extraction from the DRI database. The Excel tables included all laboratory data and are labeled with the date of laboratory analysis as such: Rad_for_validation_yyyy-mm-dd and VOC_for_Validation_yyyy-mm-dd. These files were placed in a designated folder in the GTEOSI network.

The URS on-Site Data Validation Group evaluated the accuracy of the following before returning the files to Destiny Resources:

- Field sample identification numbers;
- Duplicate project samples and corresponding field sample identification;
- Sample analysis date;
- Appropriate laboratory qualifiers; and
- Analytical results

Upon completion of the data validation task, and peer review, the data validation personnel entered the data validation qualifiers and reason codes into the Excel files. The URS on-Site Data Validation Group had the ability to enter data into the lab qualifier, analytical result, validated, data useability, final qualifier and notes sections of the Excel file. During this data entry step, inconsistencies and errors in the data were sought out and corrected to verify a smooth data load.

If the Excel file submitted to URS was incorrect or contained data errors, URS requested a new EDD file to be provided to the DRI Data Manager. Subsequently a new Excel file was submitted to URS on-Site Data Validation Group. The DRI Data Manager maintains a table in MS Access of all on-Site laboratory submissions.

URS on-Site Data Validation Group in conjunction with DRI compares the Master Barcode ID database with the laboratory EDDs.

Once the review and data entry in the Excel files was completed URS on-Site Data Validation Group returned the files to the DRI Data Manager with the file name indicating the file had been reviewed and validation qualification had been added (e.g. Rad_for_validation_yyyy-mm-dd_FINAL).

The DRI Data Manager updated the database tables with the information provided by the URS on-Site Data Validation Group. The DRI Data Manager then provided a report to URS on-Site Data Validation Group to verify a smooth data load.

Reports from the database may take on any form requested by the project team. The Data Manager designed a custom report as directed by the Project Manager. The Data Manager was responsible for directing other project team members in accessing the data.

To make efficient use of the database to support decisions, it was important for the end user to know the status and quality (i.e., non-validated, validated) of the data in the database. This was of primary importance if non-validated data had been entered into the database and distributed to project personnel. Therefore, every database report generated indicated the current status and quality of the databases.

3.0 REFERENCES

Analytical Services Protocol, *New York State Department of Environmental Conservation*. Guidance documents including Exhibits A, B, C, D, E, F, G, H, and I. (June 2000).

Science Applications International Corporation Laboratory Data Validation Guidelines for Evaluating Radionuclide Analysis (143-ARCS-93.08 Revision 06, June 2000).

Standard Operating Procedure for Determination of Aromatic and Chlorinated Volatile Organics and Lightweight Petroleum Hydrocarbons (C4–C16) Using Solid Phase Micro-extraction and A Gas Chromatograph in Soil and Water Samples, SEI-10.1.2, Revision 2, March, 31, 2004.

Standard Operating Procedure for Gamma Spectroscopy Operation and Analysis, SOP-RAD-009, Revision 1, February 4, 2004.

United States Department of Energy (USDOE) “Guidance for Radiochemical Data Validation” Draft RD4, October 4, 1995.

United States Environmental Protection Agency (USEPA) “Contract Laboratory Program National Functional Guidelines for Organic Data Review,” October, 1999.

URS et al. 2003. *Comprehensive Soil Remediation Program Work Plan – Former Sylvania Electric Products Incorporated Facility, Hicksville, New York, Site Number V 00089-1, (QAPP Appendix H)*. January 18, 2002 (Revision 5: June 2003).

USEPA “Contract Laboratory Program National Functional Guidelines for Inorganic Data Review,” October, 1999.

USEPA “Region II Standard Operating Procedure for Organic Data Review” SOP HW-6, rev.12, March 2001.

USEPA *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, (SW846), Final Update III A, April 1998.

Appendix E – Soil Boring Logs

Soil Boring Logs are located on the CD in Appendix F.

Appendix E – Boring Logs

This section provides the boring logs from drilling to obtain soil samples during the excavation activities. Borings were advanced using hand augers and hollow-stem auger drilling rigs. Boring logs are in sequential order first by cell number, then by subcell number, and lastly by boring number (where identified). In some instances borings were completed to a certain depth followed by excavation, then resumed at a later date in the same location and at times, with different drilling methods. In these instances, the earlier shallow boring is designated with a '(1)' after the boring number; the latter, deeper boring is designated with a '(2)' after the number. An example of this type of boring is C20-DL 13 (1) and CL 20-DL 13 (2). In the case where the second period of drilling occurred after the end of the Phase I remediation (September 23, 2004), the latter boring is not presented in this report but was submitted to NYSDEC with the specific investigation report to which the latter boring applies. No borings were executed in Cells 3, 4, 8, and 13 during Phase I excavation activities and are therefore not found in this appendix.

The main lithologic group name with the appropriate group symbol is described at the top of each stratum on the logs. The main lithologic group is in capital letters and bold font. Minor variations within the soil stratum are called out at the approximate elevation in which they occur, and the main lithologic group is not repeated nor any variations above the one identified.

Fill is defined as non-native material (evidenced by color, texture, structure, or miscellaneous debris), to differentiate it from the locally mined native material GTEOSI used to backfill excavations, which is noted as 'backfill' in the logs.

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	STEVE SIZE*	MILLIMETERS	STEVE SIZE*
SAND	.074	#200*	0.42	#40*
	0.42	#40*	2.00	#10*
	2.00	#10*	4.76	#4*
GRAVEL	4.76	#4*	19.1	3/4"*
	19.1	3/4"*	76.2	3"*
COBBLES	76.2	3"*	304.8	12"*
	304.8	12"*	914.4	36"*

* U. S. STANDARD ° CLEAR SQUARE OPENINGS

GRADATION CHART

Notes:

1. Dual symbols are used to indicate borderline classifications or intermixed strata.
 2. Soil descriptions and classification are based on field observations, not on laboratory testing of soil physical properties.

3. When used on the boring logs, the following terms are used to describe the consistency of cohesive soils and the relative compactness of cohesionless soils:

Cohesive Soils	Cohesionless Soils
Very Soft	Very Loose
Soft	Loose
Medium Stiff	Medium Dense
Stiff	Dense
Very Stiff	Very Dense
Hard	

4. When used on the boring logs, the following terms indicate the volume percentage of the minor soil components estimated in the field based on visual observations:
trace: 1 to 10% little: 10 to 20% some: 20 to 35% and: 35 to 50%.

5. Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch
Moist: Damp but no visible water
Wet: Visible free water, usually soil is below the water table

UNIFIED SOIL CLASSIFICATION SYSTEM AND KEY TO BORING LOGS

MAJOR DIVISIONS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
SAND AND SANDY SOILS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SM	SILTY SANDS, SAND-SILT MIXTURES
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
MORE THAN 80% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS		PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

SOIL CLASSIFICATION CHART

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U03 - DL01

Date Drilled: 5/14/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1	ML				Dark brown, SILT with organic fragments	
2	SP		0.0	NA	Dark brown, fine SAND , trace gravel	
3					Brown, fine to medium sand with fine gravel	
4						
5						
6						
7					Trace coarse gravel from 6.5-8.5'	
8						
9						
10	SW		NA	NA	Brown, fine to coarse SAND with fine to coarse gravel	
			0.6	NA		
11	EOB				NOTES: 1. Boring completed to a depth of 10.5' bgs on 5/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. Analytical samples: a. On-Site radiological samples at every foot from 3-9' b. SP samples at 10' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U03 - DL02

Date Drilled: 5/14/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1	ML				Dark brown, SILT , with organic fragments, moist	
2						
3						
4	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace coarse sand and gravel, moist	
5			0.0	NA		
6			0.0	NA		
7			0.0	NA		
8			0.0	NA		
9			0.0	NA		
10			0.0	NA		
11			0.9	NA		
12	EOB				NOTES: 1. Boring completed to a depth of 11.5' bgs on 5/17/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. On-Site radiological samples collected every foot from 3-10'; SP sample collected at 11' and analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
13						
14						

Project No.: NYSDEC: V-00089-1; URS 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL10

Date Drilled: 4/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
6							BACKFILL Soil previously excavated to 10' bgs and backfilled	
7								
8								
9								
10			6	12	0.3	3.7	Light brown to brown, fine to medium SAND with fine to coarse gravel, loose, moist Medium dense	
11								
12			21	12	0.3	3.6		
13								
14	SP		17	12	0.0	4.1		
15								
16			15	22	0.0	3.7		
17								
18	SW		13	24	0.1	3.7	Brown to red, fine to coarse SAND with fine to coarse gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL10

Date Drilled: 4/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19	SW						Brown to red, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
20			14	16	0.1	3.8		
21								
22			15	24	0.2	3.8		
23								
24			15	20	0.2	3.7		
25								
26			12	24	0.2	3.8		
27								
28	18	18	0.2	3.5				
29								
30	15	20	0.2	3.5				
31								

Project No.: NYSDEC: V-00089-1; URS 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL10

Date Drilled: 4/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kc ppm)	Description	Remarks
32		[Dotted pattern]	20	24	0.3	3.7	Brown to red, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
33								
34	SW		16	20	0.2	3.6		
35								
36			24	24	0.0	3.7		
37								
38	SP	[Dotted pattern]	27	20	0.2	3.9	Brown to red, medium to coarse SAND with fine to coarse gravel, trace silt, medium dense, moist	
39								
40		[Dotted pattern]	21	21	0.4	3.6	Brown to red, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
41	SW							
42			27	24	0.0	3.7		
43							Trace dark brown at 43.5'	
44	SP	[Dotted pattern]	26	22	0.1	3.8	Light brown to brown, fine to medium SAND , trace coarse sand and gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL10

Date Drilled: 4/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
45	SP						Light brown to brown, fine to medium SAND, trace coarse sand and gravel, medium dense, moist	
46			28	22	0.1	3.5		
47								
48			20	22	0.1	3.8		
49								
50			28	24	0.2	3.8		
51								
52			32	24	0.2	3.8		
53								
54	28	24	0.1	3.6				
55							Dense Gray mottling from 55-55.25'	
56	40	24	0.1	3.6				
57								

Project No.: NYSDEC: V-00089-1; URS 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL10

Date Drilled: 4/29/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
58			39	24	0.1	3.6	Light brown to brown with gray mottling to 57.5', fine to medium SAND , trace coarse sand and gravel, dense, moist		
59							Gray mottling from 59-59.5'		
60			32	24	0.1	3.7			
61	SP								
62			37	24	0.1	3.9			
63							Gray mottling from 63-63.5'		
64		31	24	0.0	3.6				
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 4/30/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/6/04 4. On-Site radiological samples collected every foot from 10-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel		
66									
67									
68									
69									
70									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL13

Date Drilled: 5/05/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
18		X					BACKFILL Soil previously excavated to 18' bgs and backfilled	
19	SP	.	6	18	0.0	3.0	Brown, fine to medium SAND , little to trace fine gravel, loose, moist	
20								
21	SW	.	4	18	0.0	3.0	Brown, fine to coarse SAND , some to little fine to coarse gravel, trace cobbles, loose, moist	
22								
23	SW	.	9	24	0.0	2.9	Dark tan, gravelly	
24								
25								
26	SW	.	12	17	0.0	3.0	Orange-tan, some to little fine to coarse gravel	
27								
28	SP	.	10	23	0.0	3.0	Tan, fine to medium SAND , little to trace fine gravel, medium dense, moist	
29								
30		.	11	24	0.0	2.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL13

Date Drilled: 5/05/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
31	SP	[Dotted pattern]	13	20	0.0	3.1	Orange-tan, fine to medium SAND , little to trace fine to coarse gravel, medium dense, moist		
32	SW						Tan-orange, fine to coarse SAND , some to little fine to coarse gravel, medium dense, moist		
33			12	22	0.0	2.9			
34	SP	[Dotted pattern]					Brown to tan, fine to medium SAND , little to trace fine to coarse gravel, medium dense, moist		
35			13	22	0.0	2.8			
36									
37			18	24	0.0	3.0			
38							Increasing gravel content		
39			19	>12	0.0	NA			
40							2-3" gravel layer		
41			19	24	0.0	3.3			
42									
43	SW	[Dotted pattern]	26	24	0.0	2.9	Tan, fine to coarse SAND , some fine to coarse gravel, moist		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL13

Date Drilled: 5/05/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
44	SW						Tan, fine to coarse SAND , some fine to coarse gravel, moist	
45			22	24	0.0	3.0	Light tan, fine to medium SAND , medium dense, moist	
46								
47			20	24	0.0	2.9		
48							Dense	
49			32	24	0.0	3.1		
50	SP							
51			37	24	0.0	2.9		
52								
53			42	24	0.6	2.9		
54								
55			32	24	0.0	3.0		
56								

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 1 Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: U04 - DL13
Date Drilled: 5/05/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Carrie Olsen



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57	SP		40	24	0.0	3.1	Light tan, fine to medium SAND , dense, moist	
58								
59			35	>12	0.0	3.0		
60								
61			31	24	0.0	2.9		
62								
63			32	24	0.0	3.0		
64								
65			*21	15	0.0	2.6		*Blow counts for 9" interval from 64.5-65.25'
66	EOB						NOTES: 1. Boring completed to a depth of 65.25' bgs on 5/5/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/6/04 4. On-Site radiological samples collected every foot from 18- 63'. SP sample collected at 64', analyzed on and off-Site for radioactivity and VOCs, and off-Site for nickel	
67								
68								
69								

Native File (Non-image file)...Printing skipped

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL14

Date Drilled: 5/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24	SP						Tan, fine to medium SAND , some to trace fine gravel, moist	
	SW						Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
25	SP		17	21	0.0	4.1	Tan, fine to medium SAND , some to little fine to coarse gravel, little to trace coarse sand, medium dense, moist	
26			17	22	0.0	3.7	Trace cobbles	
27							9" orange layer	
28								
29			22	22	0.0	4.1		Cobbles grade out
30								
31	SW		15	21	0.0	4.3	Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
32							Tan, fine to medium SAND , some to trace coarse sand and fine to coarse gravel, medium dense, moist	
33				24	24	0.0	4.2	
34	SP						Trace coarse sand and fine gravel, occasional cobbles, coarse gravel grades out	
35							17	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL14

Date Drilled: 5/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37			22	24	0.0	4.6	Tan, fine to medium SAND , medium dense, moist	
38								
39			18	23	0.0	3.6		
40								
41			24	23	0.0	4.2		
42								
43	SP		27	24	0.0	4.1		
44								
45			23	24	0.0	4.3		
46								
47			18	24	0.0	4.1	Some medium sand	
48								
49			23	24	0.0	4.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL14

Date Drilled: 5/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
50	SP						Tan, fine SAND , some medium sand, medium dense, moist		
51			26	24	0.0	4.6			
52									
53			27	24	0.0	4.1			
54									Dense
55			31	24	0.0	3.9			
56									
57			30	24	0.0	4.0			
58									
59									
60									
61									
62									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U04 - DL14

Date Drilled: 5/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
63	SP		32	24	0.2	4.1	Tan, fine SAND , some medium sand, dense, moist	*Blow counts for 9" interval from 64.5-65.25'
64			*25	15	0.4	4.4		
65	EOB						NOTES: 1. Boring completed to a depth of 65.25' bgs on 5/10/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/13/04 4. On-Site radiological samples (DL) collected every foot from 12- 63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 4/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21							BACKFILL Soil previously excavated and backfilled from 0-25' bgs	
22								
23								
24								
25								
26	SW		9	18	0.0	15.3	Orange-brown to brown, fine to coarse SAND , trace gravel, loose, moist	
27							Brown to dark brown, medium to coarse SAND , trace fine sand and gravel, medium dense, moist	
28	SP		13	18	0.1	2.7		
29							Brown, fine to coarse SAND , trace gravel, medium dense, moist	
30	SW		12	18	0.1	2.1		
31	SP						Brown, fine to medium SAND , medium dense, moist	
32	SW		12	19	0.0	2.0	Brown with some dark brown, fine to coarse SAND , trace gravel, medium dense, moist	
33								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 4/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34	SW		10	19	0.0	2.1	Brown with some dark brown, fine to coarse SAND , trace gravel, medium dense, moist	
35	SP		13	14	0.1	2.2	Light brown, medium to coarse SAND , some fine to coarse gravel, trace silt, medium dense, moist	
36							Light brown, fine to coarse SAND , some fine to coarse gravel, trace silt	
37	SW		11	24	0.2	2.0	Some dark red-brown from 40-41'	
38								
39								
40								
41							Some dark brown from 41-43'	
42			16	24	0.5	2.2		
43	SP		14	24	0.7	2.2	Light brown to brown with some light orange-brown, fine to medium SAND , trace gravel, medium dense, moist	
44								
45								
46			30	24	0.0	3.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 4/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47							Light brown to brown with some light orange-brown, fine to medium SAND , trace gravel, medium dense, moist Tan, gravel grades out	
48			27	24	0.0	3.6		
49							Dense	
50			32	24	0.0	3.2		
51								
52			36	24	0.0	3.3		
53	SP							
54			39	24	0.0	3.2		
55								
56			31	24	0.0	3.4		
57								
58			43	24	0.0	3.0		
59								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 4/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
60			33	24	0.0	3.1	Tan, fine to medium SAND , dense, moist	
61								
62	SP		37	24	0.0	3.0	Dry	
63							Very dense	
64			66	24	0.0	3.3		
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 4/14/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/22/04 4. On-Site radiological samples collected every foot from 25- 63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 4/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
21							BACKFILL Soil previously excavated and backfilled to 25' bgs	
22								
23								
24								
25							Dark brown to light brown, fine to coarse SAND , some to trace fine to coarse gravel, loose, moist	
26			9	10	0.0	3.1		
27								
28	SW		8	12	0.0	3.4		
29							Medium dense	
30			18	20	0.0	3.1		
31							Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
32	SP		14	24	0.0	3.1		
33								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 4/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
34	SP		20	24	0.0	3.4	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
35			17	10	0.0	3.4		
36			23	22	0.0	2.7		
37	SW		24	24	0.0	3.3	Light brown to dark brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
38			27	24	0.0	2.9		
39	SP		28	24	0.0	2.9	Light brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
40			27	24	0.0	2.9		
41			28	24	0.0	2.9		
42			36	23	0.0	2.8		
43							Dense	
44								
45								
46								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 4/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks	
47	SP						Tan, fine to medium SAND , dense, moist		
48			31	24	0.0	2.6	Dark brown mottling at 47'		
49									
50			37	24	0.0	2.7			
51								Very dense Trace clay from 51-52'	
52			52	24	0.0	3.4			
53								Gray mottling from 53-53.5'	
54			58	24	0.0	3.3			
55									
56			47	24	0.0	3.1			
57									
58	55	24	0.0	2.8					
59									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 4/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
60		SP	54	24	0.0	3.1	Tan, fine to medium SAND , very dense, moist	
61							Dense	
62	SP		33	24	0.0	3.0		
63							Very dense	
64			84	24	0.0	3.1	Brown mottling from 64-64.5'	
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 4/14/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/19/04 4. On-Site radiological samples collected every foot from 25-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V03 - DL01

Date Drilled: 5/18/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1					Open excavation Asphalt and soil excavated to 3' bgs	
2						
3						NA = Not available (rad data not recorded)
4	ML		0.0	NA	Dark brown, sandy SILT , moist	
5			0.0	NA	Trace fine gravel	
6			0.0	NA		
7			0.0	NA	Brown, fine to medium SAND , trace fine gravel	
8	SP		0.0	NA		
9			0.0	NA	Light brown	
10			0.0	NA		
11	SW		0.0	NA	Brown, fine to coarse SAND	
12	EOB				NOTES: 1. Boring completed to a depth of 11.5' bgs on 5/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. On-Site radiological samples collected every foot from 3-10'. SP sample collected at 11' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	Refusal encountered at 11.5' bgs
13						
14						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V03 - DL02

Date Drilled: 5/14/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1					Open excavation Asphalt and soil excavated to 3' bgs	
2						
3			0.0	NA	SILT	NA = Not available (rad data not recorded)
4	ML		0.0	NA	Tan, some clay, trace fine gravel	
5			0.0	NA	Brown, fine to medium SAND , some fine to coarse gravel	Refusal encountered at 10.5' bgs
6			0.0	NA		
7			0.0	NA		
8	SP		0.0	NA		
9			0.0	NA	Light brown	
10			0.0	NA		
11	EOB				NOTES: 1. Boring completed to a depth of 10.5' bgs on 5/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. Analytical samples: a. On-Site radiological samples at every foot from 3-9' b. SP samples at 10' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL07

Date Drilled: 4/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
17							BACKFILL Soil previously excavated to 19' bgs and backfilled with brown, fine to coarse sand with fine to coarse gravel, moist	
18			18	24	0.0	3.5		
19							Light brown, fine to coarse SAND and GRAVEL , medium dense, moist	
20			22	24	0.0	3.5		
21								
22	GW		22	24	0.0	3.6		
23								
24			12	21	0.0	3.4		
25								
26	SP		17	24	0.0	3.5		
27	GW						Light brown, fine to coarse SAND and GRAVEL , dry	
28	SP		18	22	0.0	3.9	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, dry	
29								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL07

Date Drilled: 4/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
30	SP		23	20	0.0	3.6	Light brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, dry	
31	GW						Light brown, fine to coarse SAND and GRAVEL , dry	
32			27	22	0.0	3.7	Light brown, fine to medium SAND , some fine gravel, dry	
33							Trace fine gravel	
34	SP		23	20	0.0	3.5		
35								
36	GW		21	23	0.0	3.5	Light brown, fine to coarse SAND and GRAVEL , dry	
37	SP						Light brown, fine to medium SAND , some to trace fine gravel, dry	
38	GW		22	24	0.0	3.5	Light brown, fine to coarse SAND and GRAVEL , dry	
39							Light brown, fine to medium SAND , some to trace fine gravel, dry	
40	SP		24	24	0.0	3.6		
41							Light brown, fine to coarse SAND and GRAVEL , dry	
42	GW		16	22	0.0	3.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL07

Date Drilled: 4/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
43	GW						Light brown, fine to coarse SAND and GRAVEL , dry	
44			34	24	0.0	3.5	Light brown, fine to medium SAND , some to trace fine gravel, trace coarse sand, dense, dry	
45								
46			25	24	0.0	3.5		
47								
48			34	24	0.0	3.5	Tan, coarse sand and gravel grade out	
49	SP							
50			38	22	0.0	4.8		
51							Tan and dark gray mottled from 51-51.5'	
52			38	24	0.0	4.2		
53								
54			35	24	0.0	4.6		
55								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL07

Date Drilled: 4/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
56			43	24	0.0	4.9	Dark gray and tan mottled, fine to medium SAND , dense, dry Tan	
57								
58			40	24	0.0	4.7		
59								
60	SP		42	24	0.0	4.7		
61							Dark gray and tan mottled from 61-61.5'	
62			41	24	0.0	4.5		
63						Dark gray and tan mottled from 63-63.5'		
64		32	24	0.0	4.8			
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 4/26/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/26/04 4. On-Site radiological samples collected every foot from 19-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
66								
67								
68								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL08

Date Drilled: 4/26/04

Sampler Type: 3-inch split spoon w/ 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
20			13	22	0.0	3.7	BACKFILL Soil previously excavated to 20' bgs and backfilled	
21							Light brown to dark brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist	
22			24	22	0.2	3.7		
23								
24	SW		13	21	0.2	3.6		
25							Dark brown from 25-25.5'	
26			22	22	0.2	4.0		
27								
28			25	24	0.2	3.8		
29	GW						Dark reddish brown, sandy GRAVEL , moist	
30			29	20	0.0	3.6	Light brown to dark brown, fine to coarse SAND with fine to coarse gravel, moist	
31	SW							
32			27	22	0.1	4.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL08

Date Drilled: 4/26/04

Sampler Type: 3-inch split spoon w/ 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks				
33	SW						Light brown to dark brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist					
34							25		24	0.2	3.7	
35							3" dark brown layer at 34.75'					
36							28		24	0.2	4.2	3" dark brown layer at 35.75'
37	SP						Light brown, fine to medium SAND , trace gravel, dry					
38									23	24	0.0	3.7
39									15	22	0.1	4.0
40	SW						Light brown to brown, fine to coarse SAND					
41							22		24	0.0	4.0	
42							3" dark brown to black layer at 42.75'					
43												
44									26	24	0.0	4.0
45												

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL08

Date Drilled: 4/26/04

Sampler Type: 3-inch split spoon w/ 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
46	SP		17	24	0.0	3.8	Grayish brown, fine to medium SAND , trace coarse sand and gravel, medium dense, moist Light brown		
47									
48			25	24	0.0	3.9	Reddish brown layer from 48-48.5'		
49								Dark brown and light brown mottling from 49-49.5' Dense	
50			38	24	0.0	4.2			
51									
52			34	24	0.0	3.9			
53									
54			38	24	0.0	4.1			
55									
56	38	24	0.0	4.0					
57									
58			32	24	0.0	3.8			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL08

Date Drilled: 4/26/04

Sampler Type: 3-inch split spoon w/ 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
59	SP						Light brown, fine to medium SAND , trace coarse sand and gravel, dense, moist		
60			27	24	0.0	3.7	Medium dense Dark gray and tan mottling from 59-59.5'		
61								Dark gray mottling from 61-61.5'	
62			38	24	0.0	3.8			
63							Dark gray mottling from 63-63.5'		
64			34	24	0.0	3.7			
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 4/27/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/28/04 4. On-Site radiological samples collected every foot from 20-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel		
66									
67									
68									
69									
70									
71									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL09

Date Drilled: 4/28/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
13							BACKFILL Soil previously excavated to 13' bgs and backfilled	
14			15	18	0.0	3.7	Brown, fine to medium SAND , trace gravel, medium dense, moist	
15								
16			14	20	0.0	3.6	Gravel grades out	
17								
18			12	18	0.0	3.3		
19	SP						With fine to coarse gravel	
20			11	18	0.0	3.7		
21								
22			12	20	0.0	3.5		
23							With fine to coarse gravel	
24			13	18	0.0	3.7		
25								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL09

Date Drilled: 4/28/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
26	SP		14	18	0.0	3.7	Brown, fine to medium SAND with fine to coarse gravel, medium dense, moist		
27									
28			11	18	0.0	3.6			
29									
30			11	18	0.0	3.7			
31									Loose
32			7	20	0.0	3.6			
33									
34	7	20	0.0	3.8					
35									
36	7	20	0.0	3.7					
37							Medium dense		
38			11	24	0.0	3.4			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL09

Date Drilled: 4/28/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39	SP						Brown, fine to medium SAND with fine to coarse gravel, medium dense, moist	
40			5	18	0.0	3.6	Brown to dark brown, fine to coarse SAND , trace gravel, loose, moist	
41								
42			4	18	0.0	4.0		
43	SW						Dark brown, trace material that appears to be asphalt-like	
44			8	18	0.0	3.7		
45								
46			3	18	0.0	3.8		
47							Dark brown, fine to medium SAND , trace coarse sand, gravel, with asphalt-like material, moist	
48								*WR = Weight of the rods NA = Not available (PID and Rad data not recorded)
49	SP							
50			6	18	0.1	3.8		
51								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL09

Date Drilled: 4/28/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
52	SP		5	16	0.1	3.6	Dark brown, fine to medium SAND , trace coarse sand, gravel, with asphalt-like material, moist	
53							Loose, organic material at 52.5' Light brown to brown, loose	
54			10	16	0.1	3.8		
55								
56			9	24	0.1	3.7		
57								
58			23	21	0.2	3.6		
59								
60			11	20	0.2	4.0		
61								
62		*WR	18	0.2	3.7			
63								
64			13	22	0.2	3.5		

*WR = Weight of the rods

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL09

Date Drilled: 4/28/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
65	SP						Light brown to brown, fine to medium SAND , trace coarse sand and gravel, moist	
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 4/29/04 2. <i>Groundwater not encountered</i> 3. Boring backfilled to surface with clean soil on 5/6/04 4. On-Site radiological samples collected every foot from 13-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL11

Date Drilled: 4/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
11							BACKFILL Soil previously excavated to 14' bgs and backfilled	
12								
13								
14							Tan, fine to medium SAND , some fine to coarse gravel, trace cobbles and organic material, dense, moist	
15			46	20	0.0	3.1		
16	SP							
17			44	24	0.0	3.1		
18							Light brown to brown, fine to coarse SAND , trace gravel, medium dense, moist	
19			23	21	0.0	3.0		
20								
21	SW		24	24	0.0	2.9		
22								
23			20	24	0.0	3.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL11

Date Drilled: 4/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
24	SW						Light brown to brown, fine to coarse SAND , trace gravel, medium dense, moist		
25			20	24	0.0	3.0			
26									
27			32	24	0.0	3.3	Orange-brown		
28									
29			23	21	0.2	3.1			
30							Light brown to brown		
31			27	24	0.0	3.3			
32									
33	26	22	0.0	3.3					
34									
35	18	21	0.0	3.4					
36									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL11

Date Drilled: 4/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks		
37	SW		31	22	2.0	3.4	Light brown to brown, fine to coarse SAND , trace gravel, dense, moist			
38										
39			31	20	1.6	3.3				
40							3" dark brown layer at 39.5'			
41	SP		41	22	1.4	3.2	Light brown to brown, fine to medium SAND , little to trace fine to coarse gravel, dense, moist			
42										
43			38	22	1.3	3.3				
44									Trace medium sand and fine gravel	
45			31	22	0.0	3.2				
46									Fine to medium sand, little to trace fine to coarse gravel	
47			30	22	0.6	3.3				
48						Orange-tan, trace cobbles to 48' Tan, medium sand and gravel grade out				
49			30	>12	0.0	3.2				

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL11

Date Drilled: 4/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
50	SP						Tan, fine SAND , dense, moist	
51			41	24	0.0	3.1		
52								
53			37	24	0.0	3.1		
54								
55			34	24	0.0	3.1		
56								
57								
58								
59								
60							Very dense	
61								
62								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL11

Date Drilled: 4/30/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
63	SP		55	24	0.0	3.2	Tan, fine SAND , very dense, moist	*Blow counts for 9" interval from 64.5 to 65.25'
64							Trace fine gravel	
65			*28	15	0.0	3.4		
66	EOB						NOTES: 1. Boring completed to a depth of 65.25' on 5/4/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/7/04 4. On-Site radiological samples collected every foot from 14-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
67								
68								
69								
70								
71								
72								
73								
74								
75								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL12

Date Drilled: 5/04/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
11							BACKFILL Soil previously excavated to 16' bgs and backfilled	
12								
13								
14								
15								
16							Dark tan to brown, fine to medium SAND , little to trace fine gravel and organic material, medium dense, moist	
17	SP		20	22	0.0	3.9		
18							Dark to light tan, fine to coarse SAND , some to little fine to coarse gravel, trace cobbles, moist	
19			27	22	0.0	4.3		
20	SW							
21			28	23	0.0	3.8		
22							Dark to light brown, fine to medium SAND , trace fine gravel, moist	
23	SP		20	20	0.7	4.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOST, Hicksville, NY

Log of Boring: V04 - DL12

Date Drilled: 5/04/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse SAND , some to little fine to coarse gravel, trace cobbles, medium dense	
25	SP		14	22	0.0	3.8	Tan to light brown, fine to medium SAND , trace fine gravel, moist	
26	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, moist	
27	SP		23	22	0.0	3.8	Tan-orange, fine to medium SAND , some to little fine to coarse gravel, moist	
28	SP						Dark brown to light brown, little to trace fine gravel	
29	SW		23	22	0.0	4.1	Dark orange-tan, fine to coarse SAND , some fine to coarse gravel, trace cobbles	
30	SP						Dark tan, fine to medium SAND , little fine gravel, moist	
31	SW		23	22	0.0	4.0	Tan-orange, fine to coarse SAND , some fine to coarse gravel, trace cobbles, moist	
32	SP						Dark tan, fine to medium SAND , trace fine gravel and cobbles, moist	
33	SP		21	24	0.0	4.0		
34	SP							
35	SP		26	24	0.0	4.1		
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL12

Date Drilled: 5/04/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37	SP		28	11	0.0	3.8	Dark tan, fine to medium SAND , trace fine gravel and cobbles, medium dense, moist	
38	SW						Tan, fine to coarse gravelly, fine to coarse SAND , moist	
39	SP						Brown to dark tan, fine to medium SAND , some to little fine to coarse gravel, moist	
39	GP		22	>12	0.0	3.7	Brown to dark tan, sandy, fine GRAVEL , moist	
40	SP						Brown to dark tan, fine to medium SAND , some to little fine to coarse gravel, moist	
40	GP						Brown to dark tan, sandy, fine GRAVEL , moist	
41			23	24	0.0	4.1	Brown to dark tan, fine to medium SAND , some to little fine to coarse gravel, moist	
42								
43			28	24	0.0	4.1		
44	SP						Light tan, gravel grades out	
45			19	24	0.0	3.9		
46								
47			17	24	0.0	4.0		
48							Some fine to coarse gravel from 47.5-48' Red-brown, trace coarse sand from 48-48.5'	
49			22	24	0.0	3.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL12

Date Drilled: 5/04/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
50	SP						Light tan, fine to medium SAND , medium dense, moist	
51			27	24	0.0	4.0		
52								
53			28	24	0.0	3.9		
54								
55			27	24	0.0	3.8		
56								Dense
57			36	24	0.0	4.2		
58								
59			36	24	0.0	3.1		
60								
61	33	24	0.0	4.1				
62								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V04 - DL12

Date Drilled: 5/04/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
63	SP		30	24	0.0	4.1	Light tan, fine to medium SAND , dense, moist	*Blow counts are for 9" interval from 64.5-65.25'
64			*29	15	0.0	NA		
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 5/4/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/7/04 4. On-Site radiological samples collected every foot from 16-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL03

Date Drilled: 4/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
20							BACKFILL Area previously excavated to 20' bgs and backfilled	
21	SW		23	22	0.0	2.9	Light brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
22	SP						Brown to light brown, fine to medium SAND , trace fine gravel, moist	
23	SW		30	24	0.0	2.9	Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
24							Tan, fine to medium SAND , some fine gravel, dense, dry	
25	SP		35	22	0.0	3.4		
26								
27	SW		41	22	0.0	3.1	Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
28							Tan, fine to medium SAND , trace fine gravel, dry	
29	SP		29	22	0.0	3.1	Medium dense Some fine to coarse gravel to 30'	
30								
31	SW		20	20	0.0	2.8	Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
32								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL03

Date Drilled: 4/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
33	SW		22	24	0.0	2.8	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
	SP						Light brown, fine to medium SAND , trace fine gravel, dry	
34	SW						Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
35	SP		29	24	0.0	3.1	Light brown, fine to medium SAND , trace fine gravel, dry	
36								
37	SW		32	24	0.0	2.9	Light brown, fine to coarse SAND , some fine to coarse gravel, dense, dry	
38								
39			32	22	0.0	2.8	Trace cobbles at 39' and 1/4" dark brown layer	
40	SP						Light brown to tan, fine to medium SAND , dry	
41	SW		29	24	0.0	3.1	Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
42							Light brown, fine to medium SAND , some to trace fine gravel, trace coarse sand, dry	
43	SP		33	23	0.0	3.2	1" dark brown with rust color, coarse sand layer at 43'	
44								
45			30	24	0.0	3.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL03

Date Drilled: 4/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks	
46	SP						Dark brown, fine to medium SAND , some to trace fine gravel, trace coarse sand, dense, dry Light brown from 45.1'		
47			53	23	0.0	3.7	Very dense 2" dark brown layer at 46.5' Trace fine to coarse gravel at 47'		
48								Tan, gravel grades out	
49			52	24	0.0	3.5			
50								Dense	
51			41	24	0.0	3.9			
53			44	24	0.0	3.7			
55			35	24	0.0	3.9			
56						Very dense			
57									
58									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL03

Date Drilled: 4/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
59	SP		54	24	0.0	3.5	Tan, fine to medium SAND , very dense, dry	
60								
61			63	24	0.0	4.0		
62								
63			56	24	0.0	4.1		
64							*Blow counts for 9" interval from 64.5-65.25'	
65	*39	15	0.0	3.3				
66	EOB						1. Boring completed to a depth of 65.25' on 4/15/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/16/04 4. On-Site radiological samples collected at every foot from 20-63' feet. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
67								
68								
69								
70								
71								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL04

Date Drilled: 4/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
18							BACKFILL Soil previously excavated to 21' bgs and backfilled	
19			20	21	0.0	2.9	Brown to dark brown, fine to coarse sand, some fine to coarse gravel, trace silt, moist	
20								
21			15	21	0.0	3.1	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
22	SW							
23			25	24	0.0	3.0		
24							Brown, coarse SAND , trace fine gravel, dry	
25	SP		14	22	0.0	2.9	Light brown, fine to medium sand, coarse sand grades out, dry	
26							Light brown, fine to coarse SAND and GRAVEL , dry	
27	GW		22	24	0.0	2.9	Light brown, fine to medium SAND , trace fine gravel, dry	
28	SP							
29			17	21	0.0	3.0	Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
30	SW							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL04

Date Drilled: 4/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprm)	Description	Remarks
31	SP	[Stippled Lithologic Symbol]	17	23	0.0	3.3	Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
	SW						Light brown, fine to coarse SAND , some fine to coarse gravel, dry	
32							Light brown, fine to medium SAND , some fine gravel, dry	
33	SP	[Stippled Lithologic Symbol]	15	24	0.0	2.9		
34								
35			12	21	0.0	3.2	Fine to coarse gravel layer from 34.6-34.7'	
36	SW						Tan, fine to coarse SAND , some fine to coarse gravel, dry	
37							Dense	
38			31	24	0.0	3.0	Light brown, fine to medium SAND , trace fine gravel, dry	
39							Light brown to brown, increasing gravel content to 39'	
40	SP	[Stippled Lithologic Symbol]	48	24	0.0	3.7		
41								Medium dense
42			22	24	0.0	3.8	Trace fine to coarse gravel and coarse sand to 42'	
43			40	24	0.0	3.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL04

Date Drilled: 4/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
44	SP						Light brown to brown, fine to medium SAND, trace fine gravel, dry		
45			22	24	0.0	3.5	Trace fine sand		
46								Fine to medium sand, dense	
47			41	24	0.0	3.7			
48								Tan, gravel grades out	
49			36	24	0.0	3.8			
50									
51			37	24	0.0	3.5			
52									
53			38	24	0.0	4.0			
54									
55	33	24	0.0	3.8					
56									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL04

Date Drilled: 4/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57	SP		42	24	0.0	3.8	Tan, fine to medium SAND, dry Dense	
58								
59			39	24	0.0	3.5		
60								
61			35	24	0.0	3.7		
62								
63			50	24	0.0	3.7		
64			*25	15	0.0	3.9		*Blow counts for 9" interval from 64.5-65.25'
65								
66	EOB						1. Boring completed to a depth of 65.25' on 4/19/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/22/04 4. On-Site radiological samples collected at every foot from 21-63' feet. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
67								
68								
69								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL05

Date Drilled: 4/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
20			26	21	0.0	3.3	BACKFILL Soil previously excavated to 20' bgs and backfilled	
21	SP						Light brown to brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, medium dense, moist	
22			28	21	0.0	3.3	Dark brown, with fine to coarse gravel	
23							Light brown, fine to coarse SAND with fine to coarse gravel, moist	
24			19	24	0.0	3.2	Trace gravel	
25							With fine to coarse gravel	
26			14	24	0.0	3.3		
27	SW							
28			20	24	0.0	3.1	Red-brown layer from 27.5-27.75'	
29								
30			20	20	0.0	3.0		
31								
32			21	24	0.0	3.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL05

Date Drilled: 4/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kc ppm)	Description	Remarks
33							Light brown, fine to coarse SAND with fine to coarse gravel, medium dense, moist Red-brown layer from 32.5-32.75'	
34	SW		23	>12	0.0	3.7		
35								
36			27	23	0.0	3.0	Trace gravel With fine to coarse gravel	
37	SP						Light brown to brown, fine to medium SAND , trace gravel, dense, dry	
38			34	24	0.0	3.1		
39	SW						Dark red-brown, fine to coarse SAND with fine to coarse gravel, dry	
40	SP		22	20	0.0	4.0	Light brown, fine to medium SAND , trace gravel, dry	
41	SW						Dark brown, fine to coarse SAND with fine to coarse gravel, dry	
42	SP		34	24	0.0	3.6	Light brown, fine to medium SAND , trace coarse sand and gravel, dry	
43							Light brown, fine to coarse SAND , trace gravel, dry	
44	SW		38	21	0.0	3.5		
45								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL05

Date Drilled: 4/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
46	SP		26	22	0.0	3.2	Light brown, fine to medium SAND , trace gravel, medium dense, dry		
47							With fine to coarse gravel, dense		
48			35	24	0.0	3.0	Gravel grades out		
49									
50			41	24	0.0	3.0			
51									
52			42	24	0.0	3.3			
53									
54			28	24	0.0	3.2			
55									
56	31	24	0.0	3.2					
57									
58	45	24	0.0	3.1					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V05 - DL05

Date Drilled: 4/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
59		SP					Light brown, fine to medium SAND, dry	
60			31	24	0.0	3.1		
61								
62			40	24	0.0	3.0		
63							Medium dense	
64		27	24	0.0	3.0			
65	EOB						1. Boring completed to a depth of 65' on 4/20/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/22/04 4. On-Site radiological samples collected at every foot from 20-63' feet. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL16

Date Drilled: 5/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
18							BACKFILL Soil previously excavated to 21' bgs and backfilled	
19								
20								
21			12	18	0.0	3.0		
22	SW						Tan, fine to coarse SAND , some to little fine to coarse gravel, medium dense, moist	
23	SP		18	24	0.0	3.0		
24								
25			10	20	0.3	3.0		
26	SW							
27			17	24	0.2	3.1		
28								
29	SP		14	24	0.3	3.0		
30								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL16

Date Drilled: 5/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31	SP		16	22	0.0	3.0	Tan, fine to medium SAND , some to little fine to coarse gravel, medium dense, moist	
32	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist Decreasing gravel	
33			15	24	0.2	3.0	Tan, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
34								
35	SP		11	24	0.2	2.9	Dark brown laminations at 35'	
36								
37			13	24	0.2	3.1		
38	SW						Tan, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
39	SP		16	19	0.0	3.0	Tan to brown, fine to medium SAND , little fine to coarse gravel, trace cobbles, medium dense, moist	
40	SW						Tan to brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
41								
42	SP		10	24	0.0	3.3	Tan to brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, medium dense, moist	
43			10	24	0.3	4.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL16

Date Drilled: 5/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
44	SP						Tan to brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, medium dense, moist		
45			13	24	0.2	2.9	Coarse gravel grades out		
46									
47			16	24	0.0	3.0			
48									
49			24	24	0.4	3.1	Trace fine gravel and clay, medium sand grades out, medium dense		
50									
51			22	24	0.4	3.2	Tan, fine to medium sand, trace cobbles		
52									
53	19	24	0.9	2.9					
54									
55	16	24	0.0	3.1					
56									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL16

Date Drilled: 5/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57			22	24	0.1	2.8	Tan, fine to medium SAND , trace fine gravel and cobbles, medium dense, moist	
58							Light tan, medium sand, gravel and cobbles grade out	
59			23	24	0.3	2.8		
60							Dense	
61	SP		31	24	0.0	2.9		
62								
63		32	24	0.8	4.0			
64								*Blow counts given for 9" interval from 64.5-65.25'
65		*21	15	0.0	3.9			
66	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 5/13/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/20/04 4. On-Site radiological samples collected every foot from 21'-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
67								
68								
69								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL19

Date Drilled: 5/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
21							BACKFILL Soil previously excavated to 21' bgs and backfilled	
22	SW		17	20	0.0	2.8	Tan, fine to coarse SAND , trace fine to coarse gravel, medium dense, moist Some fine to coarse gravel	
23	SP						Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
24	SW		10	18	0.0	2.4	Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
25							Dark tan, fine to medium SAND , trace coarse sand and fine to coarse gravel, medium dense, moist	
26			13	20	2.6	2.6		
27	SP							
28			13	24	0.2	2.7		
29								
30	SW		13	23	0.6	2.8	Dark tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
31							Dark tan to orange-tan, fine to medium SAND , some to little fine to coarse gravel, medium dense, moist	
32	SP		13	23	1.6	2.8		
33								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL19

Date Drilled: 5/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprm)	Description	Remarks
34	SP		12	23	0.9	2.6	Tan to brown, fine to medium SAND , trace fine gravel, fine gravel layers at 33.5' and 34.5', medium dense, moist	
35							Trace cobbles	
36			21	24	0.6	2.7		
37								
38	SW		26	24	0.0	2.6	Tan to orange, fine to coarse SAND , trace fine to coarse gravel and cobbles, medium dense, moist	
39	SP						Brown, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
40	SW		20	24	0.3	3.1	Tan to orange at 40.5', fine to coarse SAND , some to little fine to coarse gravel, trace cobbles, medium dense, moist	
41								
42	SP		27	24	0.4	3.1	Tan, fine SAND , trace fine to coarse gravel, medium dense, moist Fine to medium sand, little to trace fine to coarse gravel	
43								
44			30	24	0.4	3.0	Medium sand and coarse gravel grades out	
45								Dark tan, fine to medium sand, little to trace fine to coarse gravel and cobbles
46			25	24	2.4	3.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL19

Date Drilled: 5/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
47	SP						Dark tan, fine to medium SAND , little to trace fine to coarse gravel and cobbles, medium dense, moist		
48			24	24	1.1	2.7	Tan, some medium sand, coarse gravel and cobbles grade out		
49									
50			23	24	0.3	2.8			
51									
52			26	24	0.5	3.2			
53									
54			27	24	0.8	2.8			
55									
56	24	24	1.0	2.9					
57									
58	28	24	0.7	2.8					
59									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTÉOSI, Hicksville, NY

Log of Boring: V06 - DL19

Date Drilled: 5/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
60			28	24	0.7	2.9	Tan, fine SAND , some medium sand, trace fine gravel, medium dense to dense, moist Dense	
61								
62	SP		34	24	1.9	1.9		
63								
64			34	24	2.2	2.2		
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 5/19/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/19/04 4. On-Site radiological samples collected every foot from 21-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL20

Date Drilled: 5/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21							BACKFILL Soil previously excavated to 21' bgs and backfilled	
22	SP		9	20	0.0	10.5	Brown to light brown, fine to medium SAND , some fine to coarse gravel, loose, moist	
23								
24			13	18	0.0	8.9	Tan to light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
25	SW						Light brown	
26			14	20	0.0	10.3		
27								
28	SP		14	20	0.0	9.6	Brown to light brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
29							Light brown, coarse gravel grades out	
30	SW		11	18	0.0	9.4	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
31								
32	SP		11	22	0.0	9.9	Light brown, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
33								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL20

Date Drilled: 5/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34	SW		12	21	0.0	10.3	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
35			12	22	0.0	9.5		
36								
37	SP						Light brown, fine to medium SAND , some fine gravel, medium dense, moist	
38	SW		11	24	0.0	9.3	Dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
39			Light brown from 38.2'					
40	SP		12	22	0.0	9.7	Brown to tan, fine to medium SAND , trace fine gravel, medium dense, moist	
41			Dark tan					
42			15	24	0.2	10.1		
43			Brown to tan					
44			11	22	0.3	9.7		
45	Loose							
46			9	23	0.2	10.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL20

Date Drilled: 5/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
47	SP						Brown to tan, fine to medium SAND , trace fine gravel, medium dense, moist	
48							Tan to dark tan	
49	SW		20	24	0.0	10.3	Tan to brown, fine to coarse SAND , trace gravel, medium dense, moist	
50								
51	SP		18	24	0.1	10.4	Tan, fine to medium SAND , trace coarse sand, medium dense, moist	
52								
53	SP		14	24	0.0	10.4		
54								
55	SP		20	24	0.0	10.6		
56								
57	SP		20	24	0.1	9.8		
58								
59								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V06 - DL20

Date Drilled: 5/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
60		[Dotted pattern]	19	24	0.0	10.0	Tan, fine to medium SAND , trace coarse sand, medium dense, moist	
61								
62	SP		21	24	0.0	11.4		
63								
64			24	24	0.0	10.3		
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 5/24/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/27/04 4. On-Site radiological samples collected every foot from 21-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								
70								
71								
72								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V07 - DL17

Date Drilled: 5/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 20' bgs and backfilled	
20			11	24	0.0	3.3	Tan, fine to coarse SAND , some to little fine to coarse gravel, trace cobbles, medium dense, moist	
21								
22			20	24	0.0	3.1		
23	SW							
24			13	21	0.0	3.3		
25							Dense	
26			34	12	0.0	3.4	Tan to brown, some fine to coarse gravel, little cobbles	
27	SP						Tan to brown, fine to medium SAND , little to trace fine gravel, medium dense, moist	
28	SW		14	22	0.0	3.4	Tan, fine gravelly, fine to coarse SAND , medium dense, moist	
29	SP						Tan, fine to medium SAND , little to trace fine to coarse gravel, medium dense, moist Trace cobbles	
30			12	21	0.0	3.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V07 - DL17

Date Drilled: 5/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
31	SW						Tan, fine to coarse SAND , little to trace fine to coarse gravel, trace cobbles, medium dense, moist	
32	SP		11	23	0.0	3.1	Tan, fine to medium SAND , little to trace fine gravel, medium dense, moist	
33	SW						Tan, fine to coarse SAND , little to trace fine to coarse gravel, medium dense, moist	
34	SP		15	22	0.0	3.3	Tan, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
35	SW						Tan, fine to coarse SAND , little to trace fine to coarse gravel, medium dense, moist	
36	SP		13	23	0.0	3.5	Tan, fine to medium SAND , little to trace fine to coarse gravel and cobbles, medium dense, moist	
38	SW		18	22	0.0	3.2	Dark brown, fine to coarse SAND , little to trace fine to coarse gravel, trace cobbles, medium dense, moist Tan-orange from 38.1'	
40	SP		29	23	0.3	3.3	Tan, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
42	SP		19	24	0.0	3.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V07 - DL17

Date Drilled: 5/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
44	SP		18	22	0.5	3.1	Tan, fine to medium SAND , trace fine to coarse gravel and cobbles, medium dense, moist		
45									
46			15	24	0.0	3.3			
47								Tan to brown, dense	
48			35	24	0.0	3.1			
49								Medium sand, coarse gravel, and cobbles grade out	
50			35	24	0.4	3.1			
51								Medium dense Trace clay to 57'	
52			27	24	0.3	3.3			
53									
54	26	24	0.5	3.6					
55						Dense			
56	34	24	2.3	3.3					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V07 - DL17

Date Drilled: 5/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57							Tan to brown, fine SAND , trace fine gravel, trace clay to 57', dense, moist	
58			48	24	0.5	3.4	Tan, fine to medium sand, little to trace fine to coarse gravel and cobbles Light tan, medium sand, gravel and cobbles grade out	
59								
60	SP		31	24	2.0	2.9		
61							Very dense	
62			55	24	0.7	3.3		
63							Dense	
64			30	24	0.6	3.5		
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 5/14/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/20/04 4. On-Site radiological samples collected every foot from 20-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
66								
67								
68								
69								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W03 - DL01

Date Drilled: 5/14/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
1	ML				Dark brown, SILT , with organic fragments	
2	SC				Brown, clayey, fine SAND , with organic material	
3	SW		0.0	NA	Dark brown to brown, fine to coarse SAND , trace fine to coarse gravel, trace silt	NA = Not available (rad data not recorded)
4			0.0	NA		
5			0.0	NA	Silt grades out	
6			0.0	NA	Light brown	
7			0.0	NA		
8			0.0	NA	Some fine to coarse gravel	
9			0.0	NA		
10			1.6	NA		
11	EOB				NOTES: 1. Boring completed to a depth of 10.5' bgs on 5/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. Analytical samples: a. On-Site radiological samples at every foot from 3-9' b. SP samples at 10' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	Refusal encountered at 10.5' bgs
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W03 - DL02

Date Drilled: 5/14/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
1	ML				Dark brown, SILT , with organic fragments	
2	SC				Brown, clayey SAND , some organic material	
3	SP		0.0	NA	Brown, fine SAND	
4			0.0	NA	Fine to medium sand, some fine gravel	
5			0.0	NA		
6			0.0	NA		
7	SW		0.0	NA	Brown, fine to coarse SAND , some fine gravel	
8			0.0	NA		
9			0.0	NA		
10	SP		0.0	NA	Brown to dark brown, fine to medium SAND , some fine to coarse gravel	
11			0.0	NA		
11.5			0.1	NA		Refusal encountered at 11.5' bgs
12	EOB				NOTES: 1. Boring completed to a depth of 11.5' bgs on 5/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 5/20/04 4. On-Site radiological samples at every foot from 3-10'; SP samples at 11' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
13						
14						
15						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W05 - DL06

Date Drilled: 4/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
9							BACKFILL Soil previously excavated to 12' bgs and backfilled	
10								
11							Brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
12								
13			16	24	0.0	3.2		
14	SP						Light brown, fine to coarse SAND and GRAVEL , dense, dry	
15			28	22	0.0	3.0		
16							Light brown, fine to medium SAND , some fine gravel, medium dense, dry	
17	GW		44	24	0.0	3.2		
18	SP						Medium dense	
19			25	22	0.0	3.2	Trace fine gravel	
20							Light brown, fine to coarse SAND and GRAVEL , medium dense, dry	
21	GW		18	23	0.0	3.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W05 - DL06

Date Drilled: 4/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
22	GW						Light brown, fine to coarse SAND and GRAVEL , medium dense, dry	
23	SP		13	21	0.0	3.0	Light brown, fine to medium SAND , medium dense, dry	
24	SW						Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
25	SP		16	20	0.0	2.9	Light brown, fine to medium SAND , medium dense, dry	
26	SW						Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
27	SP		23	24	0.0	3.2	Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
28								
29	SW		20	24	0.0	3.0	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
30								
31	SP		30	24	0.0	3.0	Light brown, fine to medium SAND , medium dense, dry	
32	SW						Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
33	SP		26	22	0.0	2.8	Light brown, fine to medium SAND , trace coarse sand, fine gravel and cobbles, medium dense	
34								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W05 - DL06

Date Drilled: 4/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
35	SP		16	24	0.0	3.3	Light brown, fine to medium SAND, trace coarse sand, fine gravel and cobbles, medium dense Some fine gravel	
36								
37	SW		26	24	0.0	3.2	Light brown, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
38							Light brown, fine to medium SAND, trace fine gravel, medium dense, dry	
39			30	24	0.0	3.2	4" dark brown with red, coarse gravel layer	
40							Dense	
41			42	24	0.0	3.4		
42	SP						Medium dense Trace cobbles at 42'	
43			26	24	0.0	3.0		
44								
45			22	22	0.0	4.1		
46								
47			24	24	0.0	2.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W05 - DL06

Date Drilled: 4/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
48	SP						Tan, fine to medium SAND, medium dense, dry		
49			25	24	0.0	3.0			
50								Dense	
51			49	24	0.0	3.2			
52								Trace rust coloring from 52-53'	
53			41	24	0.0	2.8			
54									
55			34	24	0.0	3.0			
56									
57			46	24	0.0	3.1		Trace fine gravel from 57.5-58'	
58						Very dense			
59	62	24	0.0	3.2					
60									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W05 - DL06

Date Drilled: 4/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Mike Bucchiano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
61	SP		51	24	0.0	2.9	Tan, fine to medium SAND, dense, dry	*Blow counts for 9" interval from 64.5-65.25'
62								
63			37	24	0.0	3.2		
64			*27	15	0.0	NA		
65	EOB							
66							1. Boring completed to a depth of 65 25' bgs on 4/21/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 4/22/04 4. On-Site radiological samples collected every foot from 12-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
67								
68								
69								
70								
71								
72								
73								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL15

Date Drilled: 5/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
18							BACKFILL Soil previously excavated to 20' bgs and backfilled	
19								
20			22	12	0.0	3.4	Tan, fine to coarse SAND , some to little fine to coarse gravel, medium dense, moist Gravelly, trace cobbles	
21								
22			21	22	0.0	3.9	Gravelly, trace cobbles	
23	SW							
24			20	20	0.0	4.2		
25							Tan, fine to medium SAND , little to trace fine to coarse gravel Trace cobbles	
26			19	21	0.0	4.1		
27							Trace cobbles	
28	SP		20	20	0.0	4.1		
29								
30	SW		18	24	0.0	3.6	Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL15

Date Drilled: 5/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
31							Tan, fine to medium SAND , little fine to coarse gravel, medium dense, moist	
32			20	24	0.0	3.7		
33							Some fine to coarse gravel, trace cobbles	
34	SP		23	22	0.0	3.7		
35								
36			23	24	0.0	3.7		
37								
38	SW		21	24	0.0	3.9	Tan to dark brown, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
39							Tan, fine to medium SAND , trace fine gravel to 39.5', medium dense, moist	
40			18	24	0.3	3.8		
41	SP						Trace fine gravel	
42			24	24	0.0	3.8	1" orange layer at 42'	
43								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL15

Date Drilled: 5/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks	
44	SP		11	24	0.0	3.8	Tan, fine to medium SAND , trace fine to coarse gravel and cobbles, medium dense, moist 2" orange layer		
45							Gravel and cobbles grade out		
46			16	24	0.3	4.2	Medium dense		
47									
48			25	24	0.0	3.8			
49									
50			15	24	0.0	3.9			
51									
52			26	24	0.0	3.8			
53									
54	25	24	0.0	3.7					
55									
56	33	24	0.0	3.8					

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL15

Date Drilled: 5/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks	
57	SP						Tan, fine to medium SAND , medium dense, moist		
58			27	24	0.0	4.0			
59								Dense	
60			34	24	0.2	4.2			
61								Very dense	
62			56	24	0.0	3.8			
63							Some to little fine gravel		
64			63	24	NA	NA			
65	EOB						NOTES: 1. Boring completed to a depth of 65' bgs on 5/11/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/20/04 4. On-Site radiological samples collected every foot from 20-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel		
66									
67									
68									
69									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL18

Date Drilled: 5/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
18							BACKFILL Soil previously excavated to 19' bgs and backfilled	
19							Tan to brown, fine to coarse SAND , some to little fine to coarse gravel, loose, moist	NA= Not available (PID and Rad data not recorded)
20			8	12	NA	NA		
21							Trace cobbles	
22			10	22	0.0	2.8		
23	SW						Tan, some fine to coarse gravel, cobbles grade out, medium dense	
24			21	20	0.0	2.4		
25							Trace cobbles	
26			21	24	2.6	2.6		
27							Dark tan, fine to medium SAND , little to trace fine to coarse gravel, medium dense, moist	
28	SP		17	24	0.2	2.7		
29								
30			18	24	0.6	2.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL18

Date Drilled: 5/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
31	SW						Tan to orange-tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
							Tan	
32	SP		18	22	1.6	2.8	Tan, fine to medium SAND , little to trace fine to coarse gravel, medium dense, moist	
	SW						Tan, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
33							Tan, fine to medium SAND , little to trace fine to coarse gravel, trace cobbles, medium dense, moist	
34			26	23	0.9	2.6		
35	SP						Little coarse sand	
36			23	24	0.6	2.7		
37							Tan to brown-orange, fine to coarse SAND , some fine to coarse gravel, trace cobbles	
38	SW		20	24	0.0	2.6		1" dark brown layer at 38.5'
39							Orange-tan to light tan, fine to medium SAND , little fine to coarse gravel, medium dense, moist	
40			21	23	0.3	3.1		
41	SP						Tan, trace fine gravel, medium sand and coarse gravel grades out	
42			25	24	0.4	3.1		Fine to medium sand, some to little fine to coarse gravel
43								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL18

Date Drilled: 5/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kopm)	Description	Remarks
44			15	24	0.4	3.0	Tan, fine to medium SAND , some to little fine to coarse gravel, medium dense, moist	
45							Gravel grades out from 44.8-45' Medium sand grades out Trace fine gravel and cobbles, coarse gravel grades out	
46			15	24	2.4	3.3		
47								
48			26	24	1.1	2.7		
49	SP							
50			26	24	0.3	2.8		
51							Light tan, cobbles grade out	
52			22	24	0.5	3.2		
53								
54			22	24	0.8	2.8		
55								
56			23	24	1.0	2.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL18

Date Drilled: 5/14/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57		SP					Light tan, fine SAND , trace fine gravel, medium dense, moist	
58			32	24	0.7	2.8	Dense	
59							Medium dense	
60			24	24	0.7	2.9		
61							Dense	
62			33	24	1.9	1.9	Dark brown laminations at 61.5'	
63								
64		31	24	2.2	2.2			
65	EOB							
66							NOTES: 1. Boring completed to a depth of 65' bgs on 5/17/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 6/17/04 4. On-Site radiological samples collected every foot from 19-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 5. Boring initially called V06-DL18, subcell was corrected to W06	
67								
68								
69								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL21

Date Drilled: 5/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 19' bgs and backfilled	
19			28	12	0.0	9.3	Tan, fine to coarse SAND , trace coarse gravel, medium dense, dry	
20							Orange to tan, with fine to coarse gravel	
21			19	16	0.0	11.2		
22	SW							
23			10	18	0.0	9.9		
24							Tan	
25			21	22	0.2	10.3		
26	SP						Orange-tan, fine to medium SAND with coarse gravel, medium dense, moist	
27			23	18	0.3	7.7	Light brown to brown, fine to coarse SAND , trace gravel, medium dense, moist	
28	SW						With fine to coarse gravel	
29			23	20	0.5	10.0		
30								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL21

Date Drilled: 5/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
31	SW	[stippled]	19	22	0.3	8.3	Light brown to brown, fine to coarse SAND , trace gravel, medium dense, moist	
32	SP	[stippled]	14	23	0.0	8.2	Brown, fine SAND , moist	
33								
34								
35								
36								
37			23	18	0.3	7.5	With fine to coarse gravel	
38							3" dark brown, medium to coarse sand, trace fine sand and fine gravel at 37.75'	
39			21	22	0.5	8.1	Brown, medium to coarse sand, trace fine sand and fine gravel to 39'	
40								
41	SW	[stippled]	14	24	0.2	9.3	Brown, fine to coarse SAND , trace gravel, medium dense, moist	
42								
43								
			18	23	0.3	9.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL21

Date Drilled: 5/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpcm)	Description	Remarks	
44	SW						Light brown, fine to coarse SAND , trace gravel, medium dense, moist		
45			23	24	0.2	8.2			
46								Orange to tan Dense	
47			31	24	0.2	8.4			
48	SP						Orange to tan, fine to medium SAND , trace coarse sand and gravel, dense, moist		
49			32	24	0.3	8.3			
50								Medium dense	
51			21	23	0.6	8.4			
52									
53			25	24	0.5	8.1		Light brown to tan	
54									
55			26	24	0.3	8.2		Tan, medium sand and gravel grade out, dry	
56									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W06 - DL21

Date Drilled: 5/24/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Govi Hines, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57		SP	37	23	0.3	7.8	Tan, fine SAND , dense, dry	
58								
59			46	24	0.4	7.8		
60								
61			33	24	0.3	8.5		
62								
63		35	24	0.4	7.5			
64		21*	12	1.3	7.8		*Last blow count for 6" interval from 64.5-65'	
65	EOB						NOTES: 1. Boring completed to a depth of 65' on 5/26/04 2. Groundwater not encountered 3. Boring backfilled to surface with clean soil on 5/28/04 4. On-Site radiological samples collected every foot from 19-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
66								
67								
68								
69								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W07 - DL22

Date Drilled: 5/27/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
18			8	12	0.0	10.0	BACKFILL Soil previously excavated to 18.5' bgs and backfilled	
19	SW						Tan-orange, fine to coarse SAND , little to trace fine to coarse gravel and cobbles, loose, moist Medium dense	
20			16	24	0.0	8.9		
21								Light tan to dark brown
22			20	20	0.0	8.2		
23	SP						Light brown to dark tan, fine to medium SAND , some to little fine to coarse gravel, little to trace coarse sand, trace cobbles, medium dense, moist	
24			21	23	0.2	8.1		
25								Tan, little to trace fine to coarse gravel, cobbles grade out
26			18	24	0.3	7.3		
27								Trace cobbles
28			15	24	0.5	7.6		
29								
30			21	23	0.3	7.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W07 - DL22

Date Drilled: 5/27/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31							Tan, fine to medium SAND , little to trace coarse sand and fine to coarse gravel, medium dense, moist	
32	SP		17	22	0.0	8.4		
33								
34			21	22	0.2	7.6	Tan to brown, fine to coarse SAND and fine to coarse GRAVEL , medium dense, moist	
35								
36	GW		27	20	0.3	7.6	Tan	
37								
38			20	18	0.5	7.5		
39							Tan, fine to medium SAND , trace fine gravel, moist	
40			19	24	0.2	8.1		
41	SP							
42			20	22	0.3	7.3		
43								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W07 - DL22

Date Drilled: 5/27/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
44			24	24	0.2	7.2	Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
45							Orange, gravelly sand layer from 44.8'-45'	
46			41	24	0.2	7.5	Trace medium to coarse sand, fine gravel and clay, dense	
47								
48			47	24	0.3	7.2		
49	SP						Little to trace fine to coarse gravel, very dense	
50			54	24	0.6	7.5		
51							Dense	
52			38	24	0.5	7.3		
53								
54			34	24	0.3	7.7		
55								
56			50	24	0.3	7.5	Light tan, medium sand grades out, moist, dense	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 1 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: W07 - DL22

Date Drilled: 5/27/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
57							Light tan, fine SAND , moist, dense	
58			27	24	0.4	7.5	Medium dense	
59								
60			27	24	0.3	7.4		
61	SP						Dense	
62			31	24	0.4	7.3		
63								
64			38	24	1.3	7.6		
65	EOB							
66							NOTES:	
67							1. Boring completed to a depth of 65' bgs on 5/27/04	
68							2. Groundwater not encountered	
69							3. Boring backfilled to surface with clean soil on 5/27/04	
							4. On-Site radiological samples collected every foot from 18-63'. SP sample collected at 64', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U08 - A

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
28					Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29				Light brown, fine SAND		
31	SP					
32						
33			0.8			
34	EOB					
35					NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
36						
37						
38						
39						
40						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U08 - B

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
28					Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29				Light brown, fine SAND		
30						
31	SP					
32						
33			0.0			
34	EOB					
35					NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
36						
37						
38						
39						
40						

Project No.: NYSDEC: V-00089-01; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U08 - C

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
28							Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29						Light brown, fine SAND		
30	SP							
31								
32								
33					0.0			
34	EOB							
35							NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U08 - D

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
28							Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29						Light brown, fine SAND		
30	SP							
31								
32								
33					0.0			
34							NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
35								
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V08 - A

Date Drilled: 8/14/03

Sampler Type: Stainless steel hand auger

Logged By: Brian Gallagher



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27							Open excavation Soil previously excavated to 28'	
28							Light brown, fine SAND	
29								
30	SP							
31								
32					0.0			
33	EOB						NOTES: 1. Boring completed to a depth of 33' on 8/14/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33' bgs; chemical sample analyzed for VOCs	
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V08 - B

Date Drilled: 8/14/03

Sampler Type: Stainless steel hand auger

Logged By: Brian Gallagher



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
28							Open excavation Soil previously excavated to 29'	
29							Light brown, fine SAND	
30								
31	SP							
32								
33								
34	EOB				0.0			
35							NOTES: 1. Boring completed to a depth of 34' on 8/14/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 34' bgs; chemical sample analyzed for VOCs	
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V08 - CN

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
28							Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29						Light brown, fine SAND		
31	SP							
33					0.3			
34	EOB						NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
35								
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V08 - NW

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27							Open excavation Soil previously excavated to 28'	
28							Light brown, fine SAND	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29								
30	SP							
31								
32					0.3			
33	EOB						NOTES: 1. Boring completed to a depth of 33' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33' bgs; chemical sample analyzed for VOCs	
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V08 - SW

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
28							Open excavation Soil previously excavated to 28.5'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29	SP					Light brown, fine SAND		
30								
31								
32								
33					0.0			
34	EOB						NOTES: 1. Boring completed to a depth of 33.5' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33.5' bgs; chemical sample analyzed for VOCs	
35								
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V09

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Brian Gallagher



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
28							Open excavation Soil previously excavated to 29'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29						Light brown, fine SAND		
30	SP							
31								
32								
33					0.0			
34	EOB							
35							NOTES: 1. Boring completed to a depth of 34' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 34' bgs; chemical sample analyzed for VOCs	
36								
37								
38								
39								
40								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V10

Date Drilled: 8/13/03

Sampler Type: Stainless steel hand auger

Logged By: Brian Gallagher



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27							Open excavation Soil previously excavated to 28'	
28							Light brown, fine SAND	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
29								
30	SP							
31								
32					0.0			
33	EOB							
34							NOTES: 1. Boring completed to a depth of 33' on 8/13/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 33' bgs; chemical sample analyzed for VOCs	
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 2 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: V11

Date Drilled: 8/14/03

Sampler Type: Stainless steel hand auger

Logged By: Mike Murphy



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
23							Open excavation Soil previously excavated to 23'	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
24						Light brown, fine SAND		
25	SP							
27					0.5			
28	EOB						NOTES: 1. Boring completed to a depth of 28' on 8/14/03 2. Groundwater not encountered 3. Radiological and chemical samples collected at 28' bgs; chemical sample analyzed for VOCs	
29								
30								
31								
32								
33								
34								
35								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05

Date Drilled: 1/7/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 27' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
27				Light brown, fine to coarse SAND		
28	SW					
29						
30			0.0	NA		
31					NOTES: 1. Boring completed to a depth of 30.5' on 1/7/04 2. Groundwater not encountered 3. Radiological and chemical samples collected at 30' bgs; chemical sample analyzed for VOCs and nickel	
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL01

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
40	SW		NA	NA	Light brown, fine to coarse SAND , trace gravel, moist	NA = Not available (data not recorded)
41	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
42	SW		0.0	NA	Light brown to red, fine to coarse SAND , some gravel, moist	
43			0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
44	SP		0.0	NA		
45	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
46	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
47			0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
48	SW		0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL01

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
50			0.0	NA		
51			0.0	NA		
51			0.0	NA		
52	EOB				NOTES: 1. Boring completed to a depth of 51.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-50' b. SP sample at 51' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL02

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Brown, fine to coarse SAND , trace gravel and cobbles, moist	NA = Not available (data not recorded)
42			0.0	NA	Increasing gravel content	
43	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
44	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
45	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
46			0.0	NA		
47	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
48	SP		0.0	NA	Tan, fine to medium SAND , trace coarse sand and gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL02

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
49	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	NA = Not available (not recorded)
50			0.0	NA		
51			0.0	NA		
52	SP		0.0	NA	Tan with little light brown, fine to medium SAND , trace coarse sand and gravel	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL02

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
62	SP		0.0	NA	Tan with little light brown, fine to medium SAND , trace coarse sand and gravel	
63			0.0	NA		
64			0.0	NA		
64			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 64.5' bgs on 3/25/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-63' SP sample at 64' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL03

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
40	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	NA = Not available (data not recorded)
41			0.0	NA		
42			0.0	NA		
43			0.0	NA		
44			0.0	NA	Light brown to brown	
45	0.0	NA				
46	0.0	NA				
46	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
47	SP		0.0	NA	Tan, fine to medium SAND , trace coarse sand and gravel, moist	
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL03

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
49	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	NA = Not-available (not recorded)	
50			0.0	NA			
51			0.0	NA			
52			0.0	NA			
53	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist		
54			0.0	NA			
55	EOB				Light brown to brown, coarse sand and gravel grade out		
56							
57							
58							
59							
60							
61							

NOTES:

1. Boring completed to a depth of 54.5' bgs on 4/2/04
2. Groundwater not encountered
3. Boring backfilled to 40' bgs with clean soil on 4/2/04
4. Analytical samples:
 - a. On-Site radiological samples at every foot from 41-53'
 - b. SP sample at 54' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL04

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Brown to light brown, fine to coarse SAND , some to trace gravel, moist	NA = Not available (data not recorded)
42			0.0	NA		
43	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel	
44			0.0	NA		
45			0.0	NA		
46	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
47			0.0	NA		
48	SP		0.0	NA	Brown to light brown, medium to coarse SAND , trace fine sand and gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL04

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
49	SP		0.0	NA	Brown to light brown, fine to medium SAND , trace gravel, moist	NA = Not available (not recorded)	
50			0.0	NA	Medium to coarse sand, trace fine sand		
51			0.0	NA			
52			0.0	NA			
53			0.0	NA			Tan, fine to medium sand
54			0.0	NA			
55			0.0	NA			
56			0.0	NA			
57			0.0	NA			
58			0.0	NA			
59			0.0	NA			
60			0.0	NA			
61			0.0	NA			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL04

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kepm)	Description	Remarks
62	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace coarse sand and gravel, moist	
63			0.0	NA		
64			0.0	NA		
64			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 64.5' bgs on 3/25/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-63' SP sample at 64' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL05

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					Light brown, fine to coarse SAND , trace gravel, trace cobbles, moist	
41	SW		NA	NA	Cobbles grade out	
42			0.0	NA	Increasing gravel content	
43			0.0	NA		
44	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
45			0.0	NA		
46			0.0	NA		
47	SW		0.0	NA	Red to brown, fine to coarse SAND , trace gravel, moist	
48	SP		0.0	NA	Brown to tan, fine to medium SAND , trace gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL05

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
50			0.0	NA		
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 50.5' bgs on 3/26/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' SP sample at 50' bgs analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL06

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					Light brown, fine to coarse SAND , trace gravel, trace cobbles, moist	
41	SW		NA	NA	Increasing gravel content, cobbles grade out	
42			0.0	NA		
43			0.0	NA	Light brown, fine to medium SAND , some to trace gravel, moist	
44	SP		0.0	NA		
45			0.0	NA		
46	SW		0.0	NA	Light brown to brown, fine to coarse SAND , some gravel, moist	
47			0.0	NA		
48	SP		0.0	NA	Brown to tan, fine to medium SAND , trace gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL06

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
50			0.0	NA	Trace coarse sand	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 50.5' bgs on 3/26/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' SP sample at 50' bgs analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL07

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kepm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40	SW		NA	NA	Brown, fine to coarse SAND , trace gravel and cobbles, moist	
41			0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
42			0.0	NA		
43	SP		0.0	NA		
44			0.0	NA		
45	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
46			0.0	NA	Light brown to brown with some tan to 47', fine to medium SAND , trace gravel, moist	
47			0.0	NA		
48	SP		0.0	NA		
49			0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL07

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
53	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
54			0.0	NA	No recovery	
55	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
56	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel from 55-56', moist	
			0.0	NA		
57	EOB				NOTES: 1. Boring completed to a depth of 56.5' bgs on 4/2/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological at every foot from 41-55' b. SP sample at 56'; analyzed for on and off Site for radioactivity and VOC's and off Site for nickel	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL08

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
40	SW		NA	NA	Light brown, fine to coarse SAND , trace gravel and cobbles, moist	
41			0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA		
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL08

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
50			0.0	NA		
51			0.0	NA		
51			0.0	NA		
52	EOB				NOTES: 1. Boring completed to a depth of 51.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-50' b. SP sample at 51' bgs analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL09

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SP		NA	NA	Light brown to brown, fine to medium SAND , trace gravel and cobbles, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46	SW		0.0	NA	Light brown, fine to coarse SAND , some gravel, moist	
47	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace gravel, moist	
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL09

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
50.5			0.0	NA		
51	EOB				NOTES: 1. Boring completed to a depth of 50.5' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41'-49' b. SP sample at 50' bgs analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL10

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41	SW		NA	NA	Light brown to brown, fine to coarse SAND , trace gravel, trace cobbles, moist	
42			0.0	NA	Cobbles grade out	
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On Site radiological samples at every foot from 41-48' b. SP sample at 49' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
51						
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL11

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown, fine to coarse SAND , trace gravel and cobbles, moist	
42	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
43			0.0	NA		
44			0.0	NA		
45			0.0	NA	Reddish brown to tan	
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL11

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
50			0.0	NA	Light brown to tan	
51			0.0	NA		
52			0.0	NA		
53			0.0	NA		
53			0.0	NA		
54	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 53.5' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-52' SP sample at 53' bgs analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 	
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL12

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36					Open excavation Soil previously excavated to 37' bgs	
37						
38						
39						
40						
40	SW		NA	NA	Brown, fine to coarse SAND , trace gravel and cobbles, moist	
41					Light brown to brown, fine to medium SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA		
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		Light brown to tan

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL12

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
49	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		
52			0.0	NA		
53	EOB				NOTES: 1. Boring completed to a depth of 52.5' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-51' b. SP sample at 52' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL13

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41	SW		NA	NA	Light brown to brown, fine to coarse SAND , trace gravel, trace cobbles, moist Cobbles grade out	
42			0.0	NA		
43			0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
44	SP		0.0	NA		
45			0.0	NA		
46	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
47			0.0	NA	Light brown to tan, fine to medium SAND , moist	
48			0.0	NA		
49	SP		0.0	NA		
50			0.0	NA		
51			0.0	NA		
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL13

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
53	SP		0.0	NA	Light brown to tan, fine to medium SAND , moist	
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63	EOB				NOTES: 1. Boring completed to a depth of 62.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-61' b. SP sample at 62' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
64						
65						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL14

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40	SW		NA	NA	Brown, fine to coarse SAND , trace gravel and cobbles, moist	
41	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA	Light brown to orange from 45-46'	
45			0.0	NA		
46			0.0	NA	Tan to light brown from 47-48'	
47			0.0	NA		
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL14

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kopm)	Description	Remarks
49	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
51			0.0	NA		
52	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
53			0.0	NA		
54	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
55			0.0	NA		
55	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 54.5' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-53' SP sample at 54' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL15

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44	SP		0.0	NA	Light brown with brown to orange, fine to medium SAND , trace gravel, moist	
45			0.0	NA		
46			0.0	NA	Tan to red-brown	
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL15

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
49	SP	[stippled pattern]	0.0	NA	Tan to red-brown, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
51	SW	[stippled pattern]	0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 51' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL17

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
32					Open excavation Soil previously excavated to 35' bgs	
33						
34						
35					Brown, fine to coarse SAND , trace gravel and cobbles, moist	
36						
37					Brown, medium to coarse SAND , some gravel, moist	
38	SW					
39						
40			0.0	NA	Trace fine sand and gravel	
41			0.0	NA		
42			0.0	NA		
43	SP		0.0	NA		
44			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL17

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
45	SP	[Stippled pattern]	0.0	NA	Brown, medium to coarse SAND , trace fine sand and gravel, moist	Refusal
46	EOB		NA	NA	Fine to medium sand	
47					NOTES: 1. Boring completed to 46' bgs on 3/18/04 2. Groundwater not encountered 3. Boring backfilled on 4/2/04 4. On-Site radiological samples collected every foot from 41-45', no chemical samples collected 5. Due to refusal at 46' bgs SP sample was not collected	
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL18

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 37' bgs	
37						
38						
39						
40	SW		NA	NA	Fine to coarse SAND , trace gravel, moist	
41	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA	Light brown to tan, trace medium sand	
46			0.0	NA		
47			0.0	NA		
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL18

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Light brown to tan, fine SAND , trace medium sand and gravel, moist	
50			0.0	NA	Brown, fine to medium sand	
51	SW		0.0	NA	Light brown to brown, fine to coarse SAND , moist	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 51' bgs on 4/2/04 Groundwater not encountered Boring backfilled to 37' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL19

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 37'	
37						
38						
39						
40						
40	SP		NA	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
41			0.0	NA		
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46			0.0	NA		
47			0.0	NA		
48					Increasing gravel content from 45-46'	
					Tan	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL19

Date Drilled: 3/18/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SW	[Dotted pattern]	0.0	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
50			0.0	NA		
51	SP	[Dotted pattern]	0.0	NA	Brown, fine to medium SAND , trace gravel, moist	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 51' bgs on 4/2/04 Groundwater not encountered Boring backfilled to 37' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' bgs SP samples at 50' bgs analyzed for on and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL20

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
46			0.0	NA		
47	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL20

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SW	[Dotted pattern]	0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
50			0.0	NA		
51	SP	[Dotted pattern]	0.0	NA	Brown, fine to medium SAND , trace gravel, moist	
52	SW	[Dotted pattern]	NA	NA	Light brown to brown, fine to coarse SAND , some gravel, moist	
53	EOB				NOTES: 1. Boring completed to a depth of 52' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-50' b. SP samples at 51' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL21

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
37					Open excavation Soil previously excavated to 40' bgs	
38						
39						
40					Light brown, fine to coarse SAND , trace gravel, moist	
41	SW		NA	NA		
42			0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
43	SP		0.0	NA		
44			0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
45	SW		0.0	NA		
46			0.0	NA	Tan to light brown, fine to medium SAND , trace gravel, moist	
47	SP		0.0	NA		
48			0.0	NA	Light brown, fine to coarse SAND , some gravel, moist	
49	SW		0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL21

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
50	SW		0.0	NA	Light brown, fine to coarse SAND , some gravel, moist	
			0.0	NA		
51	EOB				NOTES: 1. Boring completed to a depth of 50.5' bgs on 4/2/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-site radiological samples at every foot from 41-49' bgs b. SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL22

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					Light brown to brown, fine to coarse SAND , trace gravel, moist	
41	SW		NA	NA		
42			0.0	NA		
43			0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
44	SP		0.0	NA		
45			0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
46	SW		0.0	NA		
47			0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
48	SP		0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL22

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
49	SP	[stippled pattern]	0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
50	SW	[stippled pattern]	0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
51	SP	[stippled pattern]	0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
52			0.0	NA		
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL22

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
62	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
63			0.0	NA		
64			0.0	NA		
64			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to a depth of 64.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: <ol style="list-style-type: none"> a. On-Site radiological samples at every foot from 41-63' b. SP sample at 64' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL23

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: NA



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
44	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
48	SW		0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL23

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: NA



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SW	[Dotted pattern]	0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
50			0.0	NA		
51	SP	[Dotted pattern]	0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
52			0.0	NA		
52			NA	NA		
53	EOB				NOTES: 1. Boring completed to a depth of 52.5' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-51' b. SP sample at 52' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL24

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcps)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41			NA	NA	Light brown to brown with some tan, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44	SW		0.0	NA		
45			0.0	NA		
46			0.0	NA		
47			0.0	NA		
48	SP		0.0	NA		Light brown to tan, fine to medium SAND , trace gravel, moist
49			0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
50	SW		0.0	NA		
51			0.0	NA	Brown with some tan, fine to medium SAND , trace coarse sand and gravel, moist	
52	SP		0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL24

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
53	SP		0.0	NA	Brown with some tan, fine to medium SAND , trace coarse sand and gravel, moist	
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63	EOB				NOTES: 1. Boring completed to a depth of 62.5' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. On-Site radiological samples at every foot from 41-62', no chemical samples collected	
64						
65						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL25

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: NA



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL25

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: NA



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
49	SP	[Stippled pattern]	0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
51	SW	[Dotted pattern]	0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
52			0.0	NA		
53			0.0	NA		
54			0.0	NA		
54	SP	[Stippled pattern]	0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
55	EOB					
56					NOTES: 1. Boring completed to a depth of 54.5' bgs on 4/2/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-53' b. SP sample at 54' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL26

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL26

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
50			0.0	NA		
51			0.0	NA		
51			0.0	NA		
52	EOB				NOTES: 1. Boring completed to a depth of 51.5' bgs on 4/2/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-50' b. SP sample at 51' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL27

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL27

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
			0.0	NA		
50	SW		0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 50.5' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-49' SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL30

Date Drilled: 3/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks	
39					Open excavation Soil previously excavated to 40' bgs		
40					Light brown to brown, fine to coarse SAND , trace gravel, moist		
41	SW		NA	NA			
42			0.0	NA			
43			0.0	NA			
44			0.0	NA			
45			0.0	NA			
46			0.0	NA			
47			0.0	NA			
48			EOB				
49							
50							
51							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL31

Date Drilled: 3/22/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40			NA	NA	Light brown, fine to coarse SAND , trace gravel, moist	
41			0.0	NA		
42	SW		0.0	NA		
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
46			0.0	NA	Light brown, fine to coarse SAND , trace gravel, moist	
47			0.0	NA		
48	SW		0.0	NA		
49			0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL31

Date Drilled: 3/22/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Light brown to tan, fine to medium SAND, trace coarse sand and gravel, moist	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63			0.0	NA		
64			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL31

Date Drilled: 3/22/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
65	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
66	EOB				NOTES: 1. Boring completed to a depth of 65' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-63' b. SP sample at 64' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - T2

Date Drilled: 1/14/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31					Open excavation Soil previously excavated to 32' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
32					Light brown, fine to coarse SAND	
33						
34						
35	SW		0.0	NA		
36						
37			0.0	NA		
38			0.0	NA		
39					NOTES: 1. Boring completed to a depth of 38.5' on 1/14/04 2. Groundwater not encountered 3. Radiological and chemical samples collected at 35', 37', and 38' bgs; chemical samples analyzed for VOCs and nickel	
40						
41						
42						
43						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - T3

Date Drilled: 1/13/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31					Open excavation Soil previously excavated to 32' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
32	SW				Light brown, fine to coarse SAND	
33						
34						
35						
36			0.0	NA		
37			0.0	NA		
38					NOTES: 1. Boring completed to a depth of 37.5' on 1/13/04 2. Groundwater not encountered 3. Radiological and chemical samples collected at 36' and 37' bgs; chemical samples analyzed for VOCs and nickel	
39						
40						
41						
42						
43						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05-N

Date Drilled: 1/7/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
26					Open excavation Soil previously excavated to 27' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
27					Light brown, fine to coarse SAND	
28	SW					
29						
30			0.0	NA		
31					NOTES: 1. Boring completed to a depth of 30.5' on 1/7/04 2. Groundwater not encountered 3. Radiological and chemical sample collected at 30' bgs; chemical sample analyzed for VOCs and nickel	
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05-S

Date Drilled: 1/7/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 27' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
27				Light brown, fine to coarse SAND		
28	SW					
29			0.0	NA		
30						
31					NOTES: 1. Boring completed to a depth of 30.5' on 1/7/04 2. Groundwater not encountered 3. Radiological and chemical sample collected at 30' bgs; chemical sample analyzed for VOCs and nickel	
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 5 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05-W

Date Drilled: 1/7/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 27' bgs	Boring was constructed from sampling sheet which contained no lithological information. Lithology based on adjacent borings.
27				Light brown, fine to coarse SAND		
28	SW					
29						
30			0.0	NA		
31					NOTES: 1. Boring completed to a depth of 30.5' on 1/7/04 2. Groundwater not encountered 3. Radiological and chemical sample collected at 30' bgs; chemical sample analyzed for VOCs and nickel	
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q08 - DL01

Date Drilled: 4/30/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
35					Open excavation Soil previously excavated to 36' bgs	
36					Light brown, fine to coarse SAND with gravel, dry	
37			0.0	NA		
38	SW		0.0	NA		
39			0.0	NA		
40			0.5	NA		
40			NA	NA		
41	EOB				NOTES: 1. Boring completed to a depth of 40.5' bgs on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 36' bgs with clean soil on 5/11/04 4. Analytical samples: a. On-Site radiological samples at every foot from 36-39' bgs b. SP sample at 40' bgs, analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
42						
43						
44						
45						
46						
47						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q08 - DL02

Date Drilled: 5/3/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
35					Open excavation Soil previously excavated to 36' bgs	
36					Light brown, fine gravelly, fine to coarse SAND , moist	Refusal at 39.5'
37			0.0	NA		
38	SW		0.0	NA		
39			0.0	NA		
39			0.0	NA		
40	EOB				NOTES: 1. Boring completed to a depth of 39.5' bgs on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 36' bgs with clean soil on 5/10/04 4. Analytical samples: a. On-Site radiological samples at every foot from 36-38' bgs b. SP sample at 39' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
41						
42						
43						
44						
45						
46						
47						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q08 - DL03

Date Drilled: 5/4/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
35					Open excavation Soil previously excavated to 36' bgs	
36	SW		0.0	NA	Light brown, fine to coarse SAND with fine to coarse gravel, moist	
37			0.0	NA		
38	EOB				NOTES: 1. Boring completed to a depth of 37.5' bgs on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 36' bgs with clean soil on 5/10/04 4. Analytical samples: a. On-Site radiological sample at 36' bgs b. SP sample at 37' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
39						
40						
41						
42						
43						
44						
45						
46						
47						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R06 - DL12

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41	SW		0.0	NA	Light brown, gravelly, fine to coarse SAND , dry	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46	SP		0.0	NA	Light brown to brown, fine to medium SAND , little gravel, dry Tan to light brown	
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R06 - DL12

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Tan to light brown, fine to medium SAND , little gravel, dry	
53			0.0	NA	Trace gravel Light brown to brown	
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel Boring initially called U06-DL12, subcell was corrected to R06 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R07 - DL17

Date Drilled: 4/23/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41					No samples collected	
42	SP		0.0	NA	Light brown with red, fine to medium SAND , little coarse sand, trace fine gravel, moist	
43	SW		0.0	NA	Light brown with dark brown, fine to coarse SAND with fine gravel, moist	
44			0.0	NA		
45	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		
					Light brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R07 - DL17

Date Drilled: 4/23/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
53	SW		0.0	NA	Brown, fine to coarse SAND , trace fine gravel, moist	
54	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace fine gravel, moist	
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 56.5' on 4/28/04 Groundwater not encountered Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples from 41-55' SP sample at 56', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel Boring initially called U07-DL17, subcell was corrected to R07 	
58						
59						
60						
61						
62						
63						
64						
65						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R07 - DL20

Date Drilled: 4/27/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					No samples collected	
41					Tan to light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
42	SP		0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R07 - DL20

Date Drilled: 4/27/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
49			0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
50			0.0	NA		
51	SP		0.0	NA		
52			0.0	NA		Light brown, some coarse sand
53			0.0	NA		Trace silt
54			0.0	NA		
55	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
56	SP		0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
			0.0	NA		
57	EOB				NOTES: 1. Boring completed to a depth of 56.5' bgs on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-55' bgs b. SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R08 - DL01

Date Drilled: 5/4/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 36' bgs	
34						
35					Light brown, fine gravelly, fine to coarse SAND , moist Some coarse gravel	
36			0.0	NA		
37			0.0	NA		
38			0.0	NA		
39			0.0	NA		
40	SW		0.0	NA		
41			0.0	NA		
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace coarse sand and gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: R08 - DL01

Date Drilled: 5/4/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
46	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace coarse sand and gravel, moist	
			0.0	NA		
47	EOB				NOTES: 1. Boring completed to a depth of 46.5' bgs on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 36' bgs with clean soil on 5/10/04 4. Analytical samples: a. On-Site radiological samples at every foot from 36-45' bgs b. SP sample at 46' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL16

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
40	SW		NA	NA	Brown, fine to coarse SAND , trace gravel and cobbles, moist	
41			0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
42			0.0	NA		
43	SP		0.0	NA		
44			0.0	NA		
45			0.0	NA	Brown to orange, fine to coarse SAND , trace gravel, moist	
46	SW		0.0	NA		
47			0.0	NA		
47	SP		0.0	NA	Tan, fine to medium SAND , trace gravel, moist	
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL16

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
51			0.0	NA		
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 51' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-site radiological samples at every foot from 41-49' bgs SP samples at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL28

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					Light brown to brown, fine to coarse SAND , trace gravel, moist	
41			NA	NA		
42			0.0	NA		
43	SW		0.0	NA		
44			0.0	NA		
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL28

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
49	SP	[Stippled pattern]	0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
50	SW	[Dotted pattern]	0.0	NA	Light brown to tan, fine to coarse SAND , trace gravel, moist	
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 50.5' bgs on 3/29/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/2/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot for 41-49' SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL29

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40						
41	SW		NA	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
42			0.0	NA		
43			0.0	NA		
44			0.0	NA		
45			0.0	NA		
46	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
47			0.0	NA		
48			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL29

Date Drilled: 3/19/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Light brown to tan, fine to medium SAND , trace gravel, moist	
50			0.0	NA		
50	SW		0.0	NA	Tan, fine to coarse SAND , trace gravel, moist	
51	EOB					
52					NOTES: 1. Boring completed to a depth of 50.5' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-49' b. SP sample at 50' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL32

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
39					Open excavation Soil previously excavated to 35' bgs	
40					Light brown to brown, fine to medium SAND , trace gravel, moist	
41	SP		NA	NA		
42			0.0	NA	Brown, fine to coarse SAND , some gravel, moist	
43		0.0	NA			
44	SW	0.0	NA			
45		0.0	NA	Some red-brown		
46			0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
47	SP		0.0	NA		
48			0.0	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
49	SW	0.0	NA			
50	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
51	SW		0.0	NA		Light brown to brown, fine to coarse SAND , trace gravel, moist

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: S05 - DL32

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
53	SW		0.0	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
54	SP		0.0	NA	Light brown to brown, fine to medium SAND , trace gravel, moist	
55	SW		0.0	NA	Light brown to brown, fine to coarse SAND , trace gravel, moist	
56	EOB				NOTES: 1. Boring completed to a depth of 55.5' bgs on 4/1/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-54' b. SP sample at 55' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
57						
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 2/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27					Open excavation Soil previously excavated to 30' bgs	
28						
29						
30						
30	SW		0.2	NA	Brown, medium to coarse SAND, some gravel, trace fine sand, moist	
31						
31			0.1	NA	Brown, fine to medium SAND, trace gravel	
32						
32			0.0	NA		
33					Trace cobbles	
33			0.0	NA		
34					Some gravel	
34			0.0	NA		
35	SP				Medium to coarse sand layer 35-36'	
35			0.0	NA		
36					Brown to light brown sand, trace gravel	
36			0.0	NA		
37						
37			0.0	NA		
38					Cobble layer from 38-39'	
38			0.0	NA		
39						
39			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL01

Date Drilled: 2/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40	SP		0.0	NA	Brown, fine to medium SAND , trace gravel and cobbles	
EOB						
41					NOTES: 1. Boring completed to a depth of 40' bgs on 2/25/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological samples at every foot from 31-39' bgs b. SP sample at 40' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 2/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
27					Open excavation Soil previously excavated to 30' bgs	
28						
29						
30						
31	SP		0.1	NA	Brown, medium to coarse SAND , some gravel, trace cobbles, moist	
32			0.0	NA	Brown, fine to medium sand, some gravel	
33			0.0	NA		
34			0.0	NA		
35			0.0	NA		
36	SW		0.0	NA	Brown, fine to coarse SAND , some gravel, moist	
37	SP		0.0	NA	Light brown to brown, medium to coarse SAND , trace fine sand and gravel, moist	
38			0.0	NA		
39			0.0	NA	Trace cobbles from 38-39'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL02

Date Drilled: 2/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40	SP		0.0	NA	Light brown, fine to medium SAND , trace gravel, moist	
40	EOB					
41					<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to a depth of 40' bgs on 2/25/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: <ol style="list-style-type: none"> a. On-Site radiological samples at every foot from 31-39' bgs b. SP sample at 40' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL33

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcps)	Description	Remarks	
37					Open excavation Soil previously excavated to 40' bgs		
38							
39							
40					Brown, fine to coarse SAND , some gravel, moist		
41			0.0				
42			0.0				
43	SW		0.0			Trace gravel	
44			0.0				
45			0.0			Orange-brown	
46			0.0				
47			0.0		Light brown to brown, fine to medium SAND , trace gravel, moist		
48	SP		0.0				
49			0.0				

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U05 - DL33

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
	SW		0.0		Light brown to brown, fine to coarse SAND , trace gravel, moist	
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 4/1/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/2/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-48' b. SP sample at 49' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL01

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41			0.0	NA	Brown with red streaks to 43', fine to medium SAND , some to trace gravel, little coarse sand, moist	
42	SP		0.0	NA		
43			0.0	NA		Brown to dark brown
44	SW		0.0	NA	Light brown to dark brown with red streaks, fine to coarse SAND , little gravel, moist	
45	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, moist	
46			0.0	NA	Brown, fine to coarse SAND , some fine gravel, moist	
47	SW		0.0	NA		
48	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
49			0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
50	SW		0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL01

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
53	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				NOTES: 1. Boring completed to a depth of 56.5' bgs on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-55' bgs b. SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL02

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41						
42	SP		0.0	NA	Brown with red streaks, fine to medium SAND , little coarse sand, trace gravel, moist	
43			0.0	NA	Some dark brown	
44	SW		0.0	NA	Brown to dark brown, fine to coarse SAND , some fine to coarse gravel, moist	
45			0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, moist	
46			0.0	NA		
47			0.0	NA		
48	SP		0.0	NA		
49			0.0	NA		
50			0.0	NA		
51			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL02

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, moist	
53	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
54			0.0	NA		
55	SP		0.0	NA	Tan to light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
56			0.0	NA		
57	EOB					
58					NOTES: 1. Boring completed to a depth of 56.5' bgs on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-55' bgs b. SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL03

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
38					Open excavation Soil previously excavated to 40' bgs	
39						
40					No samples collected	
41					Light brown to brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
42	SP		0.0	NA		
43					Light brown, fine to coarse gravelly, fine to coarse SAND , moist	
44	SW		0.0	NA		
45					Light brown to brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
	SP		0.0	NA		
			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL03

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
51			0.0	NA	Light brown to brown, fine to medium SAND , little coarse sand, trace fine gravel, moist Tan to light brown	
52			0.0	NA		
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57	SP		0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL03

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
64	SP		0.0	NA	Tan to light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 64.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-63' bgs SP sample at 64' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL04

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcps)	Description	Remarks	
39					Open excavation Soil previously excavated to 40' bgs		
40					No samples collected		
41							
42	SP		0.0	NA	Brown with red streaks, fine to medium SAND , little coarse sand, trace gravel, moist		
43			0.0	NA			
44	SW		0.0	NA	Light brown, fine to coarse SAND , some fine gravel, moist		
45			0.0	NA	Dark brown with red		
46			0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist		
47			0.0	NA			
48	SP		0.0	NA		Light brown	
49			0.0	NA			
50			0.0	NA			
51			0.0	NA			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL04

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				NOTES: 1. Boring completed to a depth of 56.5' bgs on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples at every foot from 41-55' bgs b. SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL05

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41						
42	SP		0.0	NA	Light brown with red streaks, fine to medium SAND , little coarse sand, trace fine gravel, moist	
43			0.0	NA		
44	SW		0.0	NA	Brown, fine to coarse SAND , some fine gravel, moist	
45			0.0	NA		
46			0.0	NA		
47			0.0	NA	Light and dark brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
48			0.0	NA	Brown	
49	SP		0.0	NA	Light brown	
50			0.0	NA		
51			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL05

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56	SP		0.0	NA	Tan with light brown, fine to medium SAND , trace fine gravel	
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL07

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
36					Open excavation Soil previously excavated to 40'	
37						
38						
39						
40					No samples collected	
41			0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
42			0.0	NA		
43	SP		0.0	NA		
44			0.0	NA		Brown with dark brown
45			0.0	NA	Brown with red, fine to coarse SAND , some fine gravel, moist	
46	SW		0.0	NA		
47			0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
47	SP		0.0	NA		Tan with light brown
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL07

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
49	SP		0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57	EOB				Light brown, trace coarse sand and fine gravel NOTES: 1. Boring completed to 56.5' bgs on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples collected every foot from 41-55' bgs b. SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL09

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41	SP		0.0	NA	Light brown with red, fine to medium SAND , little coarse sand, trace gravel, dry	
42			0.0	NA		
43			0.0	NA		
44	SW		0.0	NA	Brown, fine to coarse SAND with gravel, dry	
45			0.0	NA		
46	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace gravel, dry	
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL09

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Tan, fine to medium SAND , trace coarse sand and fine gravel, dry	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL13

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41	SW		0.0	NA	Light brown to brown, gravelly, fine to coarse SAND , dry	
42			0.0	NA		
43			0.0	NA	Trace dark brown	
44			0.0	NA	Trace red	
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace gravel, dry	
48			0.0	NA	Light brown to brown	
49			0.0	NA		
50			0.0	NA		
51			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U06 - DL13

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace gravel, dry	
			0.0	NA		
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL06

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41			0.0	NA	Light brown with red streaks to 43', fine to medium SAND , little coarse sand, trace fine gravel, moist	
42	SP		0.0	NA		
43			0.0	NA		Trace coarse gravel
44	SW		0.0	NA	Dark brown, fine to coarse SAND , some fine gravel, moist	
45			0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
46			0.0	NA		
47			0.0	NA		
48	SP		0.0	NA		
49			0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL06

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
52	SP		0.0	NA	Brown, fine to medium SAND, little coarse sand, trace fine gravel, moist	
			0.0	NA	Light brown	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA	Tan with light brown, trace coarse sand, gravel grades out	
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel Boring initially called U06-DL06, subcell was corrected to U07 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSi, Hicksville, NY

Log of Boring: U07 - DL08

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41			0.0	NA	Light brown with red, fine to medium SAND , little coarse sand, trace gravel, moist	
42	SP		0.0	NA		
43			0.0	NA	Brown to dark brown, fine to coarse SAND with gravel	
44			0.0	NA		
45	SW		0.0	NA		
46			0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, dry	
47			0.0	NA		
48			0.0	NA		
49	SP		0.0	NA		
50			0.0	NA		
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL08

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP	[Stippled pattern]	0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, dry	
			0.0	NA		
53						
54	SW	[Stippled pattern]	0.0	NA	Light brown, fine to coarse SAND , trace gravel, dry	
55						
56	SP	[Stippled pattern]	0.0	NA	Tan to light brown, fine to medium SAND , little coarse sand, trace gravel, dry	
			0.0	NA		
			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-55' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL10

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39					Open excavation Soil previously excavated to 40' bgs	
40					No samples collected	
41						
42	SP		0.0	NA	Light brown with red, fine to medium SAND , little coarse sand, trace gravel, dry	
43			0.0	NA		
44	SW		0.0	NA	Brown to dark brown, fine to coarse SAND with gravel, dry	
45			0.0	NA	Brown, trace silt, moist	
46			0.0	NA	Dry	
47	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace gravel, dry	
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
51			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL10

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
52	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace gravel, dry Tan with light brown, trace coarse sand and fine gravel	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 56.5' bgs on 4/28/04 Groundwater not encountered Boring backfilled to 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 41-56' bgs SP sample at 56' bgs analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL11

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
38					Open excavation Soil previously excavated to 40' bgs	
39						
40					No samples collected	
41	SP		0.0	NA	Light brown to tan with red, fine to medium SAND , little coarse sand, trace gravel, dry	
42			0.0	NA		
43			0.0	NA		
44	SW		0.0	NA	Light brown to brown, fine to coarse SAND with gravel, dry	
45			0.0	NA		
46	SP		0.0	NA	Brown, fine to medium SAND , trace coarse sand and gravel, moist	
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL11

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
51	SP	[Stippled pattern]	0.0	NA	Brown, fine to medium SAND , trace coarse sand and gravel, moist	
52			0.0	NA		
53	SW	[Stippled pattern]	0.0	NA	Brown, fine to coarse SAND , trace gravel, dry Tan to light brown	
54			0.0	NA		
55			0.0	NA		
56	SP	[Stippled pattern]	0.0	NA	Tan with light brown, fine to medium SAND , trace coarse sand and gravel, dry Tan	
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL11

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
64	SP		0.0	NA	Tan, fine to medium SAND , trace coarse sand and gravel, dry	
			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 64.5' on 4/28/04 Groundwater not encountered Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples from 41-63' SP sample at 64', analyzed on and off Site for radioactivity and VOCs and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL14

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
36					Open excavation Soil previously excavated to 40' bgs	
37						
38						
39						
40					No samples collected	
41	SP		0.0	NA	Light brown with trace red, fine to medium SAND , little coarse sand and gravel, moist	
42					Light brown, trace gravel	
43						
44					Brown	
45						
46						
47						
48						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL14

Date Drilled: 4/21/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
49	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace gravel, moist Light brown to tan	
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
56			0.0	NA		
57	EOB					
58					NOTES: 1. Boring completed to a depth of 56.5' on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples from 41-55' b. SP sample at 56', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL15

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
38					Open excavation Soil previously excavated to 40' bgs	
39						
40					No samples collected	
41						
42	SP	[Stippled pattern]	0.0	NA	Tan to light brown, fine to medium SAND , little coarse sand, trace gravel, moist	
43			0.0	NA	Light brown to dark brown	
44						
45	SW	[Stippled pattern]	0.0	NA	Light brown with red, fine to coarse SAND , trace gravel, moist	
46			0.0	NA	Brown, some fine to coarse gravel	
47			0.0	NA		
48	SP	[Stippled pattern]	0.0	NA	Brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
49			0.0	NA		
50			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL15

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
51	SP		0.0	NA	Brown, fine to medium SAND , some coarse sand, trace fine gravel, moist	
52			0.0	NA		
53			0.0	NA		
54	SW		0.0	NA	Light brown, fine to coarse SAND with gravel, moist	
55			0.0	NA		
56	SP		0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace gravel, moist	
57			0.0	NA		
58			0.0	NA		
59			0.0	NA		
60			0.0	NA		
61			0.0	NA		
62			0.0	NA		
63					Trace coarse sand and fine gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL15

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
64	SP		0.0	NA	Tan with light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
			0.0	NA		
65	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 64.5' on 4/28/04 Groundwater not encountered Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples from 41-63' SP sample at 64', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel 	
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL16

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37					Open excavation Soil previously excavated to 40' bgs	
38						
39						
40					No samples collected	
41					Light brown with red, fine to coarse SAND , some gravel, moist	
42	SW		0.0	NA		
43			0.0	NA		
44					Light brown, fine to medium SAND , little coarse sand, trace gravel, moist	
45			0.0	NA		
46			0.0	NA		
47	SP		0.0	NA		
48			0.0	NA		
49					Brown	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL16

Date Drilled: 4/22/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
50	SW		0.0	NA	Brown, fine to coarse SAND , some gravel, moist	
51			0.0	NA		
52	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
53			0.0	NA		
54			0.0	NA		
55			0.0	NA		
56			0.0	NA		
57			0.0	NA		
58	EOB				NOTES: 1. Boring completed to a depth of 57.5' on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples from 41-56' b. SP sample at 57', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL18

Date Drilled: 4/26/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41					No samples collected	
42	SP		0.0	NA	Brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
43	SW		0.0	NA	Brown, fine to coarse SAND , trace fine gravel, moist	
44	SP		0.0	NA	Brown	
45			0.0	NA		
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		
49			0.0	NA		
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL18

Date Drilled: 4/26/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
53	SP		0.0	NA	Brown, fine to medium SAND , some coarse sand and gravel, moist	
54	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
55	SP		0.0	NA	Tan with light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
56			0.0	NA		
56			0.0	NA		
57	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 56.5' on 4/28/04 Groundwater not encountered Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples from 41-55' SP sample at 56', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel 	
58						
59						
60						
61						
62						
63						
64						
65						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL19

Date Drilled: 4/26/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40					Open excavation Soil previously excavated to 40' bgs	
41					No samples collected	
42	SP		0.0	NA	Light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
43	SW		0.0	NA	Light brown, fine to coarse SAND , trace fine gravel, moist	
44	SP		0.0	NA	Light brown to brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
45			0.0	NA		
46			0.0	NA		
47			0.0	NA		
48			0.0	NA		
49	SP		0.0	NA	Some fine gravel, silt grades out	
50			0.0	NA		
51			0.0	NA		
52			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U07 - DL19

Date Drilled: 4/26/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
53	SP	[stippled pattern]	0.0	NA	Light brown, fine to medium SAND , some fine gravel, little coarse sand, moist	
54			0.0	NA	Trace silt	
55	SW	[stippled pattern]	0.0	NA	Light brown, fine to coarse SAND with gravel, moist	
56	SP	[stippled pattern]	0.0	NA	Tan with light brown, fine to medium SAND , little coarse sand, trace fine gravel, moist	
57	EOB		0.0	NA		
58					NOTES: 1. Boring completed to a depth of 56.5' on 4/28/04 2. Groundwater not encountered 3. Boring backfilled to a depth of 40' bgs with clean soil on 4/29/04 4. Analytical samples: a. On-Site radiological samples from 41-55' b. SP sample at 56', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
59						
60						
61						
62						
63						
64						
65						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U08 - DL01

Date Drilled: 5/7/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
32					Open excavation Soil previously excavated to 32' bgs		
33	SW		0.0	NA	Light brown with dark brown, fine to coarse SAND , some fine gravel, trace coarse gravel, moist		
34			0.0	NA	Brown		
35			0.0	NA			
36			0.0	NA			
37			0.0	NA			
38			0.0	NA			
39			0.0	NA		Coarse gravel grades out	
40			0.5	NA			
40			NA	NA			
41	EOB				NOTES: 1. Boring completed to a depth of 40.5' on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 32' bgs with clean soil 4. Analytical samples: a. On-Site radiological samples from 32-39' b. SP sample at 40', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel		
42							
43							
44							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U09 - DL01

Date Drilled: 5/7/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27					Open excavation Soil previously excavated to 27' bgs	
28					No samples collected	
29						
30						
31			0.0	NA	Light brown to brown, fine to coarse SAND , some fine gravel, moist	
32			0.0	NA		
33			0.0	NA		
34			0.0	NA		
35	SW		0.0	NA		
36			0.0	NA		Light brown, with fine to coarse gravel
37			0.0	NA		Some dark brown
38			0.0	NA		Brown
39			0.0	NA		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 6 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: U09 - DL01

Date Drilled: 5/7/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
40	SW		0.5	NA	Brown, fine to coarse SAND with fine to coarse gravel, moist	
			0.0	NA		
41	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> 1. Boring completed to a depth of 40.5' on 5/7/04 2. Groundwater not encountered 3. Boring backfilled to 27' bgs with clean soil 4. Analytical samples: <ol style="list-style-type: none"> a. On-Site radiological samples from 30-39' b. SP sample at 40', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel 	
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL01

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 20' bgs and backfilled	
19								
20			10	12	0.0	10.7	Tan, gravelly, fine to coarse SAND , occasional cobbles, loose, moist	
21							Medium dense	
22	SW		15	22	0.7	10.4		
23							Light to dark tan, some fine to coarse gravel	
24	SP		16	18	0.5	11.3	Light to dark tan, fine to medium SAND , some fine gravel, medium dense, moist	
25	SW						Light to dark tan, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
26			20	24	0.5	10.5	Light brown, fine to medium SAND , trace coarse sand, medium dense, moist	
27	SP							
28			16	22	1.4	10.9		
29							Coarse sand and coarse gravel grade out from 28.7-29'	
30	SW		20	22	0.6	11.1	Brown to orange to tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL01

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
31	SW	[Stippled pattern]					Brown to orange to tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
32			19	24	0.8	11.3	Tan, fine SAND , some fine to coarse gravel, trace medium sand, medium dense, moist	
33	SP	[Stippled pattern]					Fine to medium, occasional cobbles	
34				17	20	1.2	11.2	
35	SW	[Stippled pattern]					Tan, fine to coarse SAND , some to trace fine to coarse gravel, occasional cobbles, dense, moist	
36				32	24	0.6	10.4	
37							Medium dense Trace dark brown from 37-38'	
38	SP	[Stippled pattern]	18	20	0.5	11.8	Dark tan to orange-tan, medium to coarse SAND , some fine to coarse gravel, trace fine sand, medium dense, moist	
39								
40			21	23	1.2	10.8	Tan, fine sand, some medium sand, coarse sand and gravel grade out	
41							Some to trace gravel from 40.8-41.3'	
42			22	24	1.1	11.1	Trace gravel from 41.3-43'	
43								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL01

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
44	SP		15	24	1.4	11.0	Tan, fine SAND , some medium sand, trace fine to coarse gravel to 44.8', medium dense, moist	
45			Laminated fine sand, very dense layer from 44.8-45'					
46			Mottled tan and brown from 45-45.5'					
47			Some coarse sand and fine to coarse gravel from 45.5-46.5'					
48			10	24	1.0	11.6	Trace gravel from 46.5-48.5'	
49	CL						Brown, fine sandy, CLAY , moist, stiff	
50	SC		6	22	0.8	11.7	Brown, clayey, fine SAND , loose, moist	
51	CL						Brown, fine sandy, CLAY , medium stiff, moist Clayey sand from 50.8-51'	
52	EOB						NOTES: 1. Boring completed to a depth of 51' bgs on 7/22/04 2. Groundwater not encountered 3. Boring backfilled with clean sand on 7/23/04 4. Analytical samples collected: On-Site radiological (DL) at one foot intervals from 20-49'. SP at 50'; analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
53								
54								
55								
56								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL02

Date Drilled: 7/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 21' bgs and backfilled	
19								
20								
21			10	14	1.2	11.3	Tan to dark tan, fine to coarse SAND , some fine to coarse gravel, occasional cobbles, loose, moist	
22	SW						Medium dense	
23			16	22	0.4	10.7		
24							Tan, fine to medium SAND , some fine gravel, medium dense, moist	
25			13	18	1.0	11.0	Medium sand and gravel grade out from 24.8-25.8'	
26								
27	SP		19	23	2.6	11.7	Dark tan to light brown, some coarse sand and fine to coarse gravel	
28								
29			15	23	1.9	11.1		
30								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL02

Date Drilled: 7/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kepm)	Description	Remarks	
31	SP		20	24	2.3	10.7	Tan, fine to medium SAND , trace coarse sand and fine gravel, occasional cobbles, medium dense, moist		
32							Medium sand, gravel and cobbles grade out		
33			16	23	1.1	10.6	Some fine to coarse gravel to 34', trace medium sand		
34									
35			14	17	2.4	10.4	Some fine to coarse gravel to 36', trace medium sand		
36									
37	SW		19	22	2.0	10.8	Dark tan, fine gravelly, fine to coarse SAND , medium dense, moist		
38							Tan to orange-tan, trace fine gravel, occasional cobbles		
39	SP		14	21	1.8	11.1	Tan, fine SAND , medium dense, moist		
40									
41	SW		23	24	3.5	10.5	Light tan, fine to coarse SAND , trace fine gravel, medium dense, moist		
42									
43	SP		12	24	3.2	11.6	Light tan, fine SAND , trace medium sand and fine gravel, medium dense, moist		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL02

Date Drilled: 7/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
44							Light tan, fine SAND , trace medium sand and fine gravel, medium dense, moist	
45	SP		16	23	2.5	10.4		
46							Medium sand grades out from 46-48.5'	
47			21	24	3.0	11.0		
48	CL SP						2" sandy clay layer at 47.5'	
49			9	24	2.3	11.4	Light brown, clayey, fine SAND , medium dense, grading to fine sandy, clay, stiff, moist	
50	SC							
51			8	15	0.0	11.5	Wet	
52	EOB						NOTES: 1. Boring completed to a depth of 51.3' bgs on 7/21/04 2. Groundwater not encountered 3. Boring backfilled with clean sand on 7/26/04 4. Analytical samples collected: On-Site radiological at one foot intervals from 21-49'. SP at 50'; analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
53								
54								
55								
56								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL04

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 20' bgs and backfilled	
19								
20	SW		13	12	0.0	11.6	Tan, gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
21	SP						Tan, fine to medium SAND , trace fine gravel and cobbles, medium dense, moist	
22			18	18	0.7	10.4	Tan, fine to coarse SAND , some fine to coarse gravel, trace cobbles, medium dense, moist	
23								
24	SW		18	18	1.0	11.3		
25								
26	SP		21	24	1.8	10.6	Light brown, fine to medium SAND , some to trace coarse sand and fine to coarse gravel, occasional cobbles, medium dense, moist	
27								
28	SW		21	23	1.2	10.4	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
29	SP						Light brown, fine to medium SAND , some to trace coarse sand and fine to coarse gravel, medium dense, moist	
30			22	22	0.8	9.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL04

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
31	SP						Light brown, fine to medium SAND , some to trace coarse sand and fine to coarse gravel, medium dense, moist		
32			24	24	2.7	9.2	Trace medium sand, coarse gravel grades out		
33									
34	SW		25	24	1.1	9.7	Trace coarse gravel		
35									
36	SP		28	23	1.1	9.7	Brown to orange, fine to coarse gravelly, fine to coarse SAND , medium dense, moist		
37									
38			21	17	0.7	10.1	Brown, fine to medium SAND , trace fine gravel, medium dense, moist		
39	SP						Light brown, some coarse sand, trace fine to coarse gravel, occasional cobbles		
40			18	23	0.7	10.5	Tan, some medium sand, coarse gravel grades out		
41									
42	SP		26	24	1.7	10.9	Trace coarse sand from 42-42.5'		
43									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL04

Date Drilled: 7/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
44			18	24	3.6	11.0	Tan, fine SAND , some medium sand, trace fine gravel, medium dense, moist	
45	SP						Trace coarse sand from 44-44.5'	
46			25	24	2.6	11.4	Light tan, gravel grades out	
47								
48	CL		14	23	0.6	11.3	2" brown sandy clay at 48.2'	
49							Brown, fine sandy CLAY , stiff, moist	
50	CL		8	16	4.1	11.4		
51	SC						Brown, clayey, fine SAND , trace fine gravel, loose, moist	
51	EOB							
52							NOTES: 1. Boring completed to a depth of 51' bgs on 7/23/04 2. Groundwater not encountered 3. Boring backfilled with clean sand on 7/26/04 4. Analytical samples collected: On-Site radiological at one foot intervals from 20-49'. SP sample at 50'; analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
53								
54								
55								
56								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P22 - DL03

Date Drilled: 7/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
18							BACKFILL Soil previously excavated to 22' bgs and backfilled	
19								
20								
21								
22			12	12	0.0	10.7	Tan to light brown, medium to coarse SAND , trace gravel and cobbles, medium dense, moist	
23								
24	SP		11	20	0.4	10.2	Tan to brown, fine to medium sand, coarse sand grades out	
25								
26			19	20	0.7	10.6	Tan with mottled brown to 28', fine to coarse SAND , trace gravel and cobbles, medium dense, moist	
27								
28	SW		11	24	0.0	10.4	Some to little gravel	
29								
30			18	24	0.0	10.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P22 - DL03

Date Drilled: 7/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
31	SW						Tan, fine to coarse SAND , some to little gravel, trace cobbles, medium dense, moist		
32			19	20	0.0	10.6			
33	SP						Light tan, fine to medium SAND , trace gravel and cobbles, medium dense, moist		
34			19	20	0.0	10.3			
35	SW						Light brown, fine to coarse SAND , trace gravel and cobbles, medium dense, moist		
36			20	24	0.0	10.4			
37									
38			15	20	0.0	10.4			
39	SW								
40			25	24	1.6	11.5			
41									
42			26	20	0.1	10.5			
43									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 7 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P22 - DL03

Date Drilled: 7/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
44	SP		26	24	0.2	11.2	Tan, fine SAND , some medium sand, some grading to trace gravel, medium dense, moist	
45			19	24	2.9	11.7		
46							Orange-tan, gravel grades out	
47								
48	CL		18	22	0.0	11.3	Brown, sandy CLAY , very stiff to clayey sand, some fine sand lenses (less than 1" thick each), moist	
49			10	24	0.7	11.3		
50								
51	SP EOB						Tan with mottled brown, fine SAND , trace medium sand and fine gravel from 50.8-51'	
52								
53								
54								
55								
56								

NOTES:

1. Boring completed to a depth of 51' bgs on 7/21/04
2. Groundwater not encountered
3. Boring backfilled with clean sand on 7/26/04
4. Analytical samples collected: On-Site radiological at one foot intervals from 22-49'. SP at 50'; analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL01(1)

Date Drilled: 8/5/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels and Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1					Open excavation Soil previously excavated to 3' bgs	
2						
3					Brown to dark brown, fine to coarse SAND , trace gravel, moist	
4	SW		0.3	11.3		
5					Dark tan to brown, fine to coarse sandy, CLAY , trace gravel, moist	
6	CL		0.4	11.2		
7	SC		0.4	11.8	Tan to gray, clayey, fine SAND , little medium to coarse sand, trace gravel, moist	
8			0.0	12.2		
9	SP		0.0	11.3	Light brown, fine to medium SAND , trace coarse sand and gravel, moist	
10			0.0	11.0		
11	SW		0.1	10.7	Light brown to reddish brown, fine to coarse SAND , some gravel, trace cobbles	
12			0.2	10.9		
13			0.2	10.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL01(1)

Date Drilled: 8/5/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels and Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14	SW		0.3	11.0	Brown to dark brown with trace red, fine to coarse SAND , some fine to coarse gravel, trace cobbles Light brown	
15			0.3	12.0		
16			0.4	13.0		
17			0.4	10.5		
18			0.4	10.0		
18			0.3	10.8		
19	EOB				NOTES: 1. Boring completed to a depth of 18.5' bgs on 8/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 4-17' bgs. SP samples collected at 18', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
20						
21						
22						
23						
24						
25						
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL01(2)

Date Drilled: 9/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprm)	Description	Remarks
17							BACKFILL Hand auger soil boring C19-DL01(1) completed and backfilled to 18.5' bgs on 8/5/04	
18								
19			26	24	0.0	11.4	Light brown, fine SAND , trace fine gravel, medium dense, moist Fine to medium sand, trace coarse sand	
20							Tan, medium to coarse sand and fine gravel grade out	
21	SP		20	24	0.0	11.8	Light brown, fine to medium sand, some coarse sand, trace fine gravel	
22								
23			24	24	0.0	11.1		
24								
25	SW		24	24	0.0	11.6	Light brown, fine to coarse SAND , some fine gravel, trace coarse gravel, medium dense, moist	
26								
27	SP		33	24	0.0	11.3	Light brown to tan, fine to medium SAND , trace coarse sand and fine gravel, dense, moist	
28							Light brown, some coarse sand, trace fine to coarse gravel	
29			33	24	0.0	11.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL01(2)

Date Drilled: 9/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
30	SP		22	24	0.0	NA	Light brown, fine to medium SAND , trace coarse sand and fine gravel, dense, moist	NA = Not available (rad not recorded)
31							Some coarse sand, medium dense	
32	EOB						Trace coarse sand, fine gravel grades out	
33							NOTES: 1. Boring completed to a depth of 32' bgs on 9/9/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 9/14/04 4. On-Site radiological samples collected every foot from 19-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
34								
35								
36								
37								
38								
39								
40								
41								
42								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL02

Date Drilled: 9/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							Open excavation Soil previously excavated to 5.2' and backfilled to 2' below grade	
2							BACKFILL	
3								
4								
5								
5.5	SP		5	21	0.0	13.6	Dark brown, fine SAND, loose, moist	
5.8	CL						Dark brown, sandy CLAY, some silt, medium stiff, moist	
6.2	SP						Brown, fine SAND, very dense, moist	
7	SW		67	24	0.0	12.9	Brown, fine to coarse SAND, trace fine gravel, very dense, moist	
8							Brown, fine SAND, trace coarse sand and fine gravel, dense, moist	
9			34	23	0.0	13.4	Some cobbles Orange-brown, fine to medium sand, some coarse sand and fine gravel, dry	
10	SP							
11			29	22	0.0	11.5		
12							Dark orange-brown	
13	SW		56	24	0.0	11.3	Orange-brown, fine to coarse SAND, some fine gravel, very dense, dry	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL02

Date Drilled: 9/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14	SW						Orange-brown, fine to coarse SAND , some fine gravel, very dense, dry	
15							Medium dense	
16	SP		26	20	0.0	11.3	Orange-brown, fine to medium SAND , some fine gravel, dense, dry	
17							38	
18	SW						Light brown, fine to coarse SAND , medium dense, dry	
19							23	
20	SP						Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist	
21							17	
22	SW						Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
23							27	
24	SP						Light brown, fine to medium SAND , some coarse sand and fine gravel, trace coarse gravel, medium dense, moist	
25							22	
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C19 - DL02

Date Drilled: 9/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27		SP	35	24	0.4	11.2	Light brown, fine to medium SAND, some coarse sand and fine gravel, trace coarse gravel, dense, moist	
28							Medium dense	
29	SP		29	20	0.0	11.5		
30							Gravel grades out	
31			19	22	0.6	11.3		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/8/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 9/14/04 4. On-Site radiological samples collected every foot from 5-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL13 (1)

Date Drilled: 8/5/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1					Open excavation Soil previously excavated to 4' bgs	
2						
3						
4						
5	SP		0.3	11.1	Orange-brown, fine to medium SAND , trace gravel, moist	The final DL sample collected at 9' bgs was primarily composed of material from the walls of the borehole, as no further downward progression was achieved due to the presence of refusal at approximately 9' bgs.
6			0.7	10.7		
7			0.3	10.9		
8	CL		0.0	11.0	Orange-brown, fine to medium sandy, CLAY , trace gravel, moist	
9			0.2	11.0		
10	EOB		0.4	11.1	NOTES: 1. Boring completed to a depth of 9.3' bgs on 8/5/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 4-9' bgs. No SP sample collected due to refusal at 9'	
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL13 (2)

Date Drilled: 9/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 4' bgs and backfilled	
2								
3							Boring previously hand augered to 9', for description of lithology from 4-9', see boring log Cell 9 - C20 - DL13 (1)	
4								
5	SP							
6							Orange-brown, fine to coarse SAND , some gravel, trace cobbles, medium dense, moist	
7								
8	CL						Dense	
9								
10			22	20	0.0	11.1		
11	SW							
12			42	22	0.4	11.8		
13								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL13 (2)

Date Drilled: 9/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14			35	22	0.0	11.8	Orange-brown, fine to coarse SAND , some gravel, trace cobbles, dense, moist	
15								
16			27	19	0.3	11.7	Light brown to tan, trace gravel, cobbles grade out, medium dense	
17								
18	SW		30	22	0.2	11.1		
19							Some gravel, trace cobbles	
20			21	18	0.0	11.5		
21								
22			24	22	0.0	11.0		
23								
24	SP		19	18	0.0	11.9	Tan, medium to coarse SAND , some gravel, medium dense, moist	
25								
26	SW		22	22	0.0	11.1	Light brown, fine to coarse SAND , some gravel, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL13 (2)

Date Drilled: 9/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW						Light brown, fine to coarse SAND , some gravel, medium dense, moist	
28	SP		42	20	0.2	11.6	Brown, fine to medium SAND , trace gravel, dense, moist	
30	SW		24	20	0.0	11.3	Brown, fine to coarse SAND , some gravel, medium dense, moist	
31	EOB						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 31' bgs on 9/15/04 Groundwater not encountered Boring backfilled to grade with clean soil on 9/22/04 On-Site radiological samples collected every foot from 9-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 	
32								
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL14

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kopm)	Description	Remarks
1							BACKFILL Soil previously excavated to 6' bgs and backfilled	NA = Not available (PID and rad not recorded)
2								
3								
4							Brown, silty, fine to medium sand, loose, moist	
5			4	18	NA	NA		
6								
7	ML						Dark brown, sandy SILT , trace clay lenses and gravel, moist	
8	SP		12	22	0.0	12.2	Orange-brown, fine to medium SAND , trace gravel, medium dense, moist	
9							Brown, fine to coarse SAND , trace gravel and cobbles, dense, moist	
10			39	21	0.0	11.6		
11	SW						Orange-brown, some gravel	
12			46	22	0.0	11.9		
13							Very dense	
			60	22	0.0	11.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL14

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14							Orange-brown, fine to coarse SAND , some gravel, very dense, moist	
15			30	24	0.0	11.5	Dense	
16							Tan to brown	
17			46	22	0.0	11.5		
18							Trace gravel and cobbles, medium dense	
19			18	19	0.0	11.3		
20								
21			18	14	0.0	11.7		
22								
23		31	22	0.0	11.1			
24								
25		24	22	0.0	11.4			
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL14

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW		42	24	2.4	11.6	Tan to brown, fine to coarse SAND , trace gravel and cobbles, dense, moist	
28							Medium dense	
29			25	24	0.0	11.2		
30	SP						Tan to brown, fine to medium SAND , trace gravel, medium dense, moist	
31			16	20	0.9	11.5		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/16/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/23/04 4. On-Site radiological samples collected every foot from 6-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL25

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
1							BACKFILL Soil previously excavated to 2.75' bgs and backfilled	
2								
3			8	20	0.3	13.4	FILL , brown to dark brown, sandy silt, some fine gravel, trace slag, moist	
4								
5	CL		5	18	0.0	13.5	Light brown, silty CLAY , some to trace fine gravel, medium stiff, moist	
6	SM						Light brown, silty, fine to medium SAND , trace fine gravel, loose, moist	
7	ML		8	18	0.0	13.2	Light brown, clayey SILT , trace fine to coarse gravel, moist	
8							Orange-brown, fine to coarse SAND , some fine gravel, loose, moist Medium dense Some coarse gravel	
9			23	22	0.0	11.8		
10	SW						Coarse gravel grades out	
11			26	22	0.0	11.8		
12							Dense	
13			39	24	0.0	11.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL25

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14							Orange-brown, fine to coarse SAND, some fine gravel, dense, moist	
15			36	22	0.0	11.4		
16							Light brown	
17			35	24	0.0	11.4		
18							Medium dense	
19			19	22	0.0	11.2	Tan, gravelly	
20	SW							
21			17	20	0.0	11.2		
22							Light brown, some fine gravel, medium dense	
23			19	20	0.0	11.3		
24							Gravelly, trace coarse gravel	
25			22	18	0.0	11.5		
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL25

Date Drilled: 9/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27	SW		37	24	0.0	11.6	Light brown grading to orange-brown, fine to coarse SAND , some fine gravel, dense, dry Light brown, trace fine gravel, moist	
28	SP						Light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
29			22	22	0.0	11.1	Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
30	SW						Trace fine gravel	
31			14	18	0.0	11.6	Tan, some fine gravel	
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/16/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/23/04 4. Analytical samples: a. On-Site radiological samples at every foot from 2-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL26

Date Drilled: 9/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 7' bgs and backfilled	
2								
3								
4								
5								
6								
7								
8	SP		6	14	0.0	12.0	Brown, fine to medium SAND , trace silt and clay lenses, loose, moist	
9							Orange-brown, fine to coarse SAND , loose, moist	
10							Trace gravel and cobbles, medium dense	
11	SW		25	22	0.1	11.9		
12							Dense	
13			40	24	0.1	11.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL26

Date Drilled: 9/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14			41	24	0.4	11.3	Orange-brown, fine to coarse SAND, trace gravel and cobbles, dense	
15							Some gravel	
16			32	16	0.5	11.6		
17							Tan	
18			36	24	0.4	11.5		
19	SW						Medium dense	
20			20	18	0.0	11.5		
21							Light brown, dense	
22		30	18	0.0	11.2			
23								
24		23	18	0.0	11.3			
25							Brown, fine to medium SAND, trace gravel, dense, moist	
26	SP		32	21	0.0	11.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL26

Date Drilled: 9/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SP	[Stippled pattern]					Brown, fine to medium SAND , trace gravel, dense, moist	
28			37	22	0.0	11.2	Tan	
29		[Dotted pattern]					Light brown, fine to coarse SAND , trace gravel and cobbles, medium dense, moist	
30	SW		24	18	0.0	11.3		
31			33	12	0.0	11.0		
32	EOB						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 32' bgs on 9/17/04 Groundwater not encountered Boring backfilled to grade with clean soil on 9/23/04 Analytical samples: <ol style="list-style-type: none"> On-Site radiological samples at every foot from 7-29' bgs SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel 	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL27

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
1							BACKFILL Soil previously excavated to 6' bgs and backfilled	
2								
3								
4								
5								
6								
7			18	24	0.0	12.1	Tan, fine to medium SAND , trace gravel, medium dense, moist	
8	SP						Light brown to orange-brown, trace cobbles	
9			15	24	0.0	12.2		
10								
11	SM		13	24	0.0	12.5	Brown, silty SAND , trace gravel and cobbles, medium dense, moist	
12	SP						Orange-brown, fine to medium SAND , trace gravel and cobbles, medium dense, moist	
13			18	24	0.2	11.7	Light brown, some gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL27

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14	SP						Light brown, fine to medium SAND , some gravel, trace cobbles, medium dense, moist	
15			17	24	0.0	11.7	Tan	
16								
17			17	24	0.2	11.3		
18								
19			11	22	0.0	11.7		
20	SW							
21			12	22	0.0	11.8		
22								
23			11	22	0.0	11.1		
24								
25			15	24	0.0	11.5		
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL27

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27		[Lithologic Symbol]	17	20	0.3	11.5	Tan to light brown, fine to coarse SAND , some gravel, trace cobbles, medium dense, moist	
28							Light brown	
29	SW		16	22	0.0	11.6		
30								
31			13	24	0.0	11.4		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/20/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/27/04 4. Analytical samples: a. On-Site radiological samples at every foot from 6-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL28

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 8' bgs and backfilled	
2								
3								
4								
5								
6								
7								
8	SP		10	24	0.0	11.9	Light brown, fine to medium SAND , trace gravel, medium dense, moist	
9							Orange-brown, fine to coarse SAND , some gravel, trace cobbles, medium dense, moist	
10	SW		13	24	0.0	11.4		
11							Light brown, fine to medium SAND , some gravel, trace cobbles, medium dense, moist	
12	SP		20	24	1.8	11.5	1" dark brown layer	
13								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL28

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14	SP		18	24	1.1	11.9	Brown to light brown, fine to medium SAND, some gravel, trace cobbles, medium dense, moist	
15							Orange-brown, fine to coarse SAND, some gravel, trace cobbles, medium dense, moist	
16			17	24	1.7	11.5		
17							Light brown, some cobbles	
18			12	20	0.8	11.6		
19							Tan, trace cobbles	
20	SW		8	22	0.1	11.3		
21							Some cobbles	
22			11	22	1.8	11.6		
23								
24			12	22	1.4	11.7		
25								
26	SP		16	24	0.0	11.7	Light brown, fine to medium SAND, trace gravel and cobbles, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C20 - DL28

Date Drilled: 9/20/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
27		SP					Light brown, fine to medium SAND, trace gravel and cobbles, medium dense, moist		
28			12	24	1.3	11.5			
29									Tan, trace gravel, cobbles grade out
30			13	24	0.0	11.6			
31			18	12	0.0	11.6			
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/20/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/27/04 4. Analytical samples: a. On-Site radiological samples at every foot from 8-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel		
33									
34									
35									
36									
37									
38									
39									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL29

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 3.5' bgs and backfilled	
2								
3							Brown SILT and fine to medium sand, trace gravel, medium dense, moist	
4	ML		11	24	0.0			
5							Orange-brown, fine to medium SAND , trace clay lenses and fine gravel, medium dense, moist	
6	SP		13	24	0.0			
7							Brown to orange-brown, silty, fine to medium SAND , trace fine gravel, medium dense, moist	
8	SM		12	24	0.0			
9							Orange-brown, fine to medium SAND , trace fine gravel and cobbles, dense, moist	
10			35	18	0.0			
11	SP						Orange-brown to tan, medium dense	
12			17	22	0.0			
13								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL29

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14			15	24	0.0		Brown, fine to coarse SAND , some fine gravel, trace cobbles, medium dense, moist	
15	SW						Orange-brown	
16			20	24	0.0			
17							Brown, fine to medium SAND , trace fine gravel, medium dense, moist	
18	SP		11	21	0.0			
19							Tan, fine to coarse SAND , some fine gravel, trace cobbles, medium dense, moist	
20			10	24	0.0			
21								
22			10	24	0.0			
23	SW							
24		11	22	0.0				
25								
26		17	24	0.0				

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL29

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW						Tan, fine to coarse SAND , some fine gravel, trace cobbles, medium dense, moist	
28			9	24	0.0		Tan, fine to medium SAND , some fine gravel, medium dense, moist	
29							Trace cobbles	
30	SP		10	24	0.0			
31			13	12	0.0			
32	EOB							
33							NOTES: 1. Boring completed to a depth of 32' bgs on 9/22/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/28/04 4. Analytical samples: a. On-Site radiological samples at every foot from 4-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL30

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 9' bgs and backfilled	
2								
3								
4								
5								
6								
7								
8								
9								
9	SP		13	24	35.1	11.9	Brown, fine to medium SAND , some fine gravel, trace silt, medium dense, moist	
10							Light brown to orange-brown, fine to coarse SAND , some fine gravel, trace cobbles, medium dense, moist	
11	SW		22	24	12.4	12.0		
12							Brown, fine to medium SAND , some gravel, medium dense, moist	
13	SP		15	24	27.0	11.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL30

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks	
14	SP						Dark brown, gravelly, fine to medium SAND, medium dense, moist		
15			14	24	17.4	11.6	Brown, some gravel Brown to orange-brown		
16								Orange-brown, trace fine gravel	
17			16	24	2.2	11.8			
18									
19			15	22	1.1	11.3			
20									
21									
22							Trace cobbles		
23									
24									
25									
26									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL30

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortoland



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27			16	24	0.6	11.7	Light brown, fine to medium SAND, some fine gravel, medium dense, moist	
28								
29	SP		9	24	0.7	11.9		
30								
31			13	24	0.9	11.8		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/21/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/27/04 4. Analytical samples: a. On-Site radiological samples at every foot from 9-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL31

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							<p>BACKFILL Soil previously excavated to 4' bgs and backfilled</p>	
2								
3								
4	SP							Brown, fine to medium SAND , some silt, trace fine gravel, loose, moist
5	SW		5	24	0.0			Orange-brown, fine to coarse SAND , trace fine gravel, loose, moist
6	CL							Light gray to brown, silty CLAY , trace fine gravel and organics, medium stiff, moist
6	ML							Light gray to brown, clayey SILT , moist
7			10	24	0.0			Orange-brown, fine to coarse SAND , trace fine gravel, moist
8								Some gravel, loose
9	SW		9	14	0.0			
10								Light brown, gravelly, medium dense
11			13	24	2.4			
12	SP							Brown, fine to medium SAND , trace fine gravel, medium dense, dry Some silt
13			10	24	0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL31

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
14							Light brown, fine to coarse SAND, trace fine gravel, medium dense, dry	
15			14	20	0.2		Some fine gravel	
16								
17			15	24	0.0			
18	SW							
19			13	24	0.0		Some coarse gravel, moist	
20								
21			10	24	0.0			
22								
23			10	22	0.2			
24								
25	SP		13	24	0.3		Light brown, fine to medium SAND, trace coarse sand and fine gravel, medium dense, moist	
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL31

Date Drilled: 9/22/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27			12	24	0.3		Light brown to tan, fine to coarse SAND , some gravel, medium dense, dry	
28	SW						Tan, trace fine gravel	
29			10	18	0.0			
30							Light brown	
31			12	24	0.0			
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/22/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/28/04 4. Analytical samples: a. On-Site radiological samples at every foot from 4-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL32

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 9' bgs and backfilled	
2								
3								
4								
5								
6								
7								
8								
9			8	24	0.0	11.8	Light brown, fine to coarse SAND , trace gravel, loose, moist	
10	SW						Orange-brown, some fine gravel, medium dense, dry	
11			18	24	0.0	12.3	Tan, fine to medium SAND , trace coarse sand and fine gravel, medium dense, dry	
12							Light brown to tan, some gravel	
13	SP		13	20	0.0	11.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL32

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14	SP						Light brown to tan, fine to medium SAND , some gravel, trace coarse sand, medium dense, dry	
15			11	20	0.0	12.0	Light brown to orange-brown, fine to coarse SAND , medium dense, moist 4" fine to medium sand layer at 14.7' Some gravel	
16								
17			16	24	0.2	11.8		
18	SW						Light brown	
19			13	24	0.2	11.9		
20							Trace gravel	
21			10	24	0.0	11.6		
22								
23			12	24	0.2	11.7		
24								
25	SP		11	20	0.0	11.8	Light brown, fine to medium SAND , medium dense, moist	
	SW						Light brown, fine to coarse SAND , trace gravel, medium dense, moist	
26								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: C21 - DL32

Date Drilled: 9/21/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27	SW		14	24	0.4	11.8	Light brown, fine to coarse SAND , trace gravel, medium dense, moist	
28								
29			11	24	0.4	11.8	Tan, trace fine gravel, dry	
30								
31			12	24	0.5	11.6		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/21/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/28/04 4. Analytical samples: a. On-Site radiological samples at every foot from 9-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL03

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1					Open excavation Soil previously excavated to 7' bgs and shoveled to 8' bgs to create standing platform	
2						
3						
4						
5						
6						
7						
8						
9	SP		0.0	14.0	Light brown, fine to medium SAND , trace cobbles, moist	
10			0.0	17.1	Trace coarse sand and fine to coarse gravel	
11	SW		0.0	16.0	Dark tan to tan, fine to coarse SAND , some to trace fine to coarse gravel and cobbles, moist	
12			0.0	16.3		
13			0.0	16.5	Brown to dark brown, cobbles grade out	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL03

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14	SW		0.0	16.8	Brown to dark brown, fine to coarse SAND , some to trace fine to coarse gravel, moist	
15			0.0	18.0		
16			0.0	18.8	Trace cobbles	
17			0.0	18.4		
18			0.0	15.9		
19			0.0	15.9		
20			0.2	17.8		
21			0.2	16.0		
22			0.3	15.8		
23			0.3	15.9		
24			0.2	16.2		
25			0.0	16.1	Brown, gravelly, some cobbles	
26			0.0	16.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL03

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW		0.0	17.2	Dark tan, fine to coarse SAND , some fine to coarse gravel, trace cobbles, moist	
28			0.4	14.3		
29			0.0	14.0		
30			0.0	13.2		
30			0.1	13.5		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 8/3/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 8-29'. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL04

Date Drilled: 9/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
13							BACKFILL Soil previously excavated and backfilled to 13' bgs	
14			81	24	0.7	11.5	Light brown, fine to medium SAND , some fine to coarse gravel, very dense, moist Trace fine gravel	
15							Some fine to coarse gravel	
16			52	22	0.0	11.5		
17	SP						Medium to coarse sand, some fine gravel, fine sand grades out, medium dense	
18			23	18	0.0	11.5		
19								
20			19	18	0.0	11.6		
21							Light brown, fine to coarse SAND , some fine gravel, medium dense, moist	
22	SW		26	22	0.0	11.2		
23							Light brown, medium to coarse SAND , some fine to coarse gravel, dry	
24	SP		19	16	0.0	11.1		
25								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D19 - DL04

Date Drilled: 9/8/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
26			32	21	0.0	11.1	Light brown to brown, fine to medium SAND, some fine gravel, dense, dry Trace coarse gravel	
27							Trace coarse sand	
28	SP		32	24	0.0	11.1		
29							Dark brown from 28.7-29' Trace fine to coarse gravel, coarse sand grades out, medium dense	
30			22	22	0.0	10.9	Medium to coarse sand, some fine gravel, fine sand grades out	
31							Fine to medium sand, trace fine gravel, coarse sand grades out	
32			42	15	0.0	10.9	Dense	
33	EOB							
34							NOTES: 1. Boring completed to a depth of 31.2' bgs on 9/8/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4. On-Site radiological samples collected every foot from 13-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
35								
36								
37								
38								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL15

Date Drilled: 9/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
10			15	22	0.0		BACKFILL Soil previously excavated to 11' bgs and backfilled with light brown, fine to medium sand, trace fine gravel, moist	
11								
12			15	18	0.0	11.5	Brown, fine to medium SAND , trace fine gravel and silt, medium dense, moist	
13							Orange-brown, trace coarse sand and fine to coarse gravel, silt grades out	
14	SP		4	14	0.0	11.2	Coarse gravel grades out, very loose	
15							Light brown to orange-brown	
16			4	12	0.0	11.6		
17								
18			14	24	0.0	11.3	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
19								
20	SW		15	20	0.0	11.4		
21								
22	SP		19	24	0.0	11.3	Light brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, dry	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL15

Date Drilled: 9/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
23	SP						Light brown, fine to medium SAND, trace coarse sand and fine gravel, medium dense, dry	
24	SW		23	19	0.0	11.4	Light brown, fine gravelly, fine to coarse SAND, trace coarse gravel, medium dense, dry	
25								
26	SP		37	22	0.0	11.3	Light brown, fine to medium SAND, some fine gravel, trace coarse sand, dense, dry	
27								
28	SW		41	24	0.0	11.7	Light brown, fine to coarse SAND, some fine gravel, dense, dry Dark brown banding from 28.2'-28.4'	
29								
30			37	18	0.0	11.4	Gravelly	
31	SP						Light brown, fine to medium SAND, trace fine gravel, dense, dry	*Blow counts for 9" interval from 31.5-32.25'; recovery for 15" interval from 31-32.25'
32	SW		*30	*15	0.0	NA	Light brown, fine to coarse SAND, some fine to coarse gravel, dry	
33	EOB						NOTES: 1. Boring completed to a depth of 32.25' bgs on 9/9/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 9/21/04 4. On-Site radiological samples collected every foot from 11-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
34								
35								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL16

Date Drilled: 8/6/2004

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 16' bgs	
15						
16					Tan, medium to coarse SAND , some fine to coarse gravel, trace cobbles, moist	
17			0.0	11.9		
18			0.0	11.8		
19			0.2	11.9		Trace fine sand
20			0.6	11.9		
21	SP		0.2	13.1		
22			0.3	11.9		
23			0.2	12.2		
24			0.3	13.8		
25			0.3	11.9		Trace cobbles
26	SW			0.4	12.1	Tan, fine to coarse SAND , some to trace fine to coarse gravel, occasional cobbles, moist

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D20 - DL16

Date Drilled: 8/6/2004

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SW		0.4	11.9	Tan, fine to coarse SAND , some to trace fine to coarse gravel, occasional cobbles, moist	
28			0.4	12.0		
29			0.0	11.8		
30	EOB				NOTES: 1. Boring completed to a depth of 29' bgs on 8/6/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 17-28'. SP sample collected at 28.5', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D21 - DL33

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark and Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 16' bgs	
15						
16	SW		0.0	18.4	Light brown, fine to coarse SAND , trace fine gravel, moist With fine to coarse gravel	
17			0.0	15.9		
18			0.0	15.9		
19			0.2	17.8		
20			0.2	16.0		
21			0.3	15.8		
22	SP		0.3	15.9	Light brown, medium to coarse SAND with fine to coarse gravel, trace cobbles, moist	
23			0.2	16.2		
24	SW		0.0	16.1	Light brown, fine to coarse SAND , trace fine to coarse gravel, moist	
25	SP		0.0	16.3	Tan, fine to medium SAND , trace coarse sand and fine gravel from 25-26', moist	
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: D21 - DL33

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark and Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SW		0.0	17.2	Light brown, fine to coarse SAND , trace fine to coarse gravel, moist Trace cobbles	
28			0.4	14.3		
29			0.0	14.0		
29			0.0	13.2		
30	EOB				NOTES: 1. Boring completed to a depth of 29.5' bgs on 8/5/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 17-28'. SP sample collected at 29', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL05

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1							BACKFILL Soil previously excavated to 7' bgs and backfilled with tan, fine to medium sand, trace gravel, dry	NA = Not available (rad data not recorded)
2								
3			5	10	0.0	NA		
4								
5			6	11	0.0	NA		
6								
7			11	12	0.0	12.5		
8	SW						Orange-brown, fine to coarse SAND , trace gravel, medium dense, moist Very dense	
9			80	12	0.0	11.9		
10							Light brown, fine to medium SAND , some gravel, dense, moist	
11	SP		37	11	0.3	12.0		
12							Dark brown, trace gravel	
13			34	20	0.0	12.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL05

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks	
14	SP						Dark brown, fine to medium SAND, trace gravel, dense, moist		
15			50	22	0.5	13.5	2" black, coarse sand layer at 14' Brown, some gravel		
16								Light brown, trace cobbles, medium dense	
17			26	20	1.6	12.9	Medium to coarse sand, fine sand grades out		
18								Dense	
19			34	23	0.0	12.9			
20						Medium dense			
21									
22									
23	SW		14	22	0.0	12.4	Brown, fine to coarse SAND, some gravel, trace cobbles, medium dense, moist		
24									
25	SP		19	24	0.0	12.4	Orange-brown, fine to medium SAND, some gravel, trace cobbles, medium dense, moist		
26									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL05

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27			32	22	0.5	12.5	Light brown, fine to medium SAND, some gravel, trace cobbles, dense, moist	
28							Orange-brown, trace gravel	
29	SP		31	24	0.5	12.2		
30							Medium dense	
31			20	23	0.0	11.3		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/13/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/17/04 4. Analytical samples: a. On-Site radiological samples at every foot from 7-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL06

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
6							BACKFILL Soil previously excavated to 9' bgs and backfilled with light brown, fine to medium sand, dry	NA = Not available (rad data not recorded)
7			8	14	0.0	NA		
8								
9			39	12	0.0	12.4	Tan, fine to coarse SAND , trace fine gravel and cobbles, dense, dry	
10							Cobbles grade out, very dense	
11			58	6	0.0	12.3		
12							Trace fine to coarse gravel, medium dense	
13			18	18	0.0	12.3		
14	SW						Dark brown laminations	
15			26	24	0.0	12.2	Light orange-brown, some fine gravel, coarse gravel grades out	
16							Light brown, trace fine gravel	
17			25	20	0.0	11.9		
18								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL06

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19		[Dotted pattern]	22	24	0.0	11.9	Light brown, fine to coarse SAND , some fine gravel, medium dense, dry	
20							Moist	
21			17	18	1.8	11.8		
22	SW							
23			14	18	0.0	11.8	Tan	
24								
25			24	18	0.0	11.9		
26								
27	SP	[Dotted pattern]	29	18	0.0	11.9	Light brown, medium to coarse SAND , some fine gravel, medium dense, dry Fine to medium sand, trace coarse sand and fine to coarse gravel	
28	SW	[Dotted pattern]					Light brown, fine to coarse SAND , some fine gravel, dense, dry	
29	SP	[Dotted pattern]	47	24	0.0	12.3	Light brown, fine to medium SAND , trace fine gravel, dense, moist	
30	SW	[Dotted pattern]					Light brown, fine to coarse SAND , some fine gravel, medium dense, dry	
31			24	24	0.0	12.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E19 - DL06

Date Drilled: 9/13/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprm)	Description	Remarks	
32	SW						Light brown, fine to coarse SAND , some fine gravel, medium dense, dry		
							Trace fine gravel		
33			23	17	0.0	12.4			
34								Some fine to coarse gravel, dense, moist	
35			32	18	0.0	12.2			
36						Trace fine gravel, coarse gravel grades out, medium dense, dry			
37			28	20	0.0	11.0	Some fine gravel		
38	EOB						NOTES: 1. Boring completed to a depth of 38' bgs on 9/14/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/17/04 4. Analytical samples: a. On-Site radiological samples at every foot from 9-35' bgs b. SP samples at 36' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel		
39									
40									
41									
42									
43									
44									

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL01

Date Drilled: 3/26/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1		[Cross-hatched pattern]	0.3	11.6	FILL, dark brown, fine to medium sand, some coarse sand and gravel, cobbles, concrete and metal debris, moist	
2			0.6	13.6		
3			0.3	12.2		
4	SW	[Dotted pattern]	0.5	10.8	Dark brown, fine to coarse sand, some coarse sand and gravel, trace silt, concrete and metal debris, moist	
5			0.3	11.1		
6			0.7	10.7		
7			0.3	10.9		
8			0.0	11.0		
9			0.2	11.0		
10			0.4	11.1		
11	EOB				NOTES: 1. Boring completed to a depth of 10' bgs on 3/26/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: on-Site radiological samples every foot from 1-10' bgs	
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL02

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11					Open excavation Soil previously excavated to 15' bgs	
12						
13					Light brown, fine to coarse SAND , some to trace fine to coarse gravel, moist	No samples collected from 15-25'. Soil screened for VOCs and radioactivity during augering operations
14						
15						
16						
17						
18						
19	SW					
20						
21						
22						
23						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL02

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24	SW				Light brown, fine to coarse SAND , some to trace fine to coarse gravel, moist	No samples collected from 26-29'. Soil screened for VOCs and radioactivity during augering operations
25						
26						
27						
28						
29						
30			0.2	11.8		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 8/9/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. Off-Site nickel sample collected at 25'. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
32						
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program/ Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 9/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
19							BACKFILL Soil previously excavated to 19' bgs and backfilled	E20-DL03 originated and completed to 40' bgs on 9/15/04. Boring resumed on 11/11/04 from 42-67'.
19-20	SP		15	18	0.0	13.8	Brown, fine to medium SAND , some fine gravel, occasional clay seams, medium dense, moist	
20-21							Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
21-22			22	16	0.0	12.4	Light brown	
22-23								
23-24			28	18	0.0	11.9		
24-25							Trace fine gravel and cobbles to 25', very dense	
25-26	SW		72	10	0.0	11.6	Tan, some fine gravel	
26-27							Medium dense	
27-28			25	19	0.0	11.7		
28-29							Some fine to coarse gravel	
29-30			29	21	0.0	12.0		
30-31								
31			19	18	0.0	11.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Drilling Program/ Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E20 - DL03
Date Drilled: 9/15/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
32	SW						Tan, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
33	SP		29	22	0.5	11.6	Tan, fine to medium SAND , trace fine gravel, medium dense, dry	
34							Tan, fine to coarse SAND , trace fine gravel, medium dense, dry	
35			13	18	0.0	11.1	Light brown to tan, trace fine to coarse gravel	
36							Some fine to coarse gravel	
37			27	18	0.0	11.8		
38	SW						Brown, trace fine to coarse gravel, moist Some fine gravel, coarse gravel grades out	
39			28	22	0.6	11.9	Trace fine to coarse gravel, moist	
40							Light brown, dry	
41			27	22	0.7	11.3		
42							Some fine to coarse gravel	
43			22	24	1.3	NA		NA = Not available (Rad data not recorded)
44								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program/ Cell 9 Delineation Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL03

Date Drilled: 9/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
45	SW	[stippled]	32	*9	0.8	NA	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	NA = Not available (Rad data not recorded)
46		[stippled]	13	20	2.3	NA	Brown to light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
47	SP	[stippled]						
48		[stippled]	17	24	1.9	NA		
49		[diagonal lines]					Brown silty CLAY with fine sand seams, stiff, dry Interbedded with silty fine sand from 49-51'	
50	CL	[diagonal lines]	14	24	1.9	NA		
51		[stippled]					Brown to light brown, fine to medium SAND , some silt, trace fine gravel, dense, moist	
52	SP	[stippled]	32	22	1.1	NA		
53		[stippled]					Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, moist	
54	SW	[stippled]	25	22	1.6	NA	Light brown, fine to coarse SAND , some fine to coarse gravel	
55	SP	[stippled]					Light brown to tan, fine to medium SAND , trace clay seams, medium dense, moist	
55	CL	[diagonal lines]					Brown to light brown, silty CLAY , very stiff, moist	
56	SC	[diagonal lines]	18	24	2.1	NA	Orange-brown clayey SAND , medium dense, moist	
56	SP	[stippled]					Light brown, fine to medium SAND , medium dense, moist	
57								

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Drilling Program/ Cell 9 Delineation Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: E20 - DL03
Date Drilled: 9/15/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
58			31	24	1.5	NA	Brown to tan, fine to medium SAND , medium dense, moist Trace coarse sand and clay seams to 57.5'	NA = Not available (Rad data not recorded)
59							Medium dense	
60			24	20	1.5	NA		
61								
62	SP		19	24	2.0	NA		
63								
64			29	24	2.8	NA	Brown seam at 63.4'	
65							Tan to light brown	
66			21	24	2.6	NA		
67	EOB						NOTES: 1. Boring completed to 67' bgs on 11/11/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 11/12/04 4. Analytical samples from 19-64': a. On-Site radiological every foot b. On-Site nickel every even-numbered foot from 20-38' c. On-Site nickel every odd-numbered foot from 43-63' 5. SP samples collected at 40' and 65', analyzed on and off-Site for radioactivity, VOCs, and nickel	
68								
69								
70								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (1)

Date Drilled: 8/4/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
11					Open excavation Soil previously excavated to 17' bgs	
12						
13						
14						
15						
16						
17					Brown, fine to coarse gravelly, fine to coarse SAND , occasional cobbles, moist	
18			0.0	15.9		
19			0.0	15.9		
20	SW		0.2	17.8		Tan, trace fine to coarse gravel
21			0.2	16.0		
22			0.3	15.8		
23			0.3	15.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL17 (1)

Date Drilled: 8/4/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24	SW		0.2	16.2	Tan, fine to coarse SAND , trace fine to coarse gravel, moist	
25	SP		0.0	16.1	Tan, medium to coarse SAND , some fine to coarse gravel and cobbles, moist	
26			0.0	16.3		
27			0.0	17.2		
28	EOB				NOTES: 1. Boring completed to a depth of 27' bgs on 8/6/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 17-26'. SP sample collected at 26.5', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
29						
30						
31						
32						
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL18

Date Drilled: 9/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
16							BACKFILL Soil previously excavated and backfilled to 2' below grade	
17	SP		12	18	0.0	14.1	Brown, fine to medium SAND , trace coarse sand and fine gravel, medium dense, moist	
18							Brown fine to coarse SAND , trace fine to coarse gravel, moist	
19	SW		28	24	0.0	11.5		
20							Brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
21	SP		13	19	0.0	11.6		
22								
23			NA	18	0.0	11.2	Brown, fine to coarse SAND , trace fine to coarse gravel, moist	NA = Not available (blow counts not recorded)
24	SW							
25			NA	24	0.0	12.4		
26							Brown, fine to medium SAND , some to trace coarse sand and fine to coarse gravel, dry	
27	SP		NA	24	0.0	11.7		
28								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E20 - DL18

Date Drilled: 9/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
29			NA	24	0.0	29.9	Reddish brown, fine SAND, some to trace silt and clay, moist	NA = Not available (blow counts not recorded)
30	SP						Brown, fine to medium sand, trace coarse sand and fine gravel	
31			NA	24	0.6	11.4	Mottled with dark brown	
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/7/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 9/8/04 4. On-Site radiological samples collected every foot from 17-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								
40								
41								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E21- DL34

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
16					Open excavation Soil previously excavated to 18 bgs'	
17						
18	SP		0.0	18.2	Brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, occasional cobbles, moist	
19	SW		0.0	16.7	Brown, fine to coarse SAND , trace fine to coarse gravel and cobbles, moist	
20			0.0	9.5		
21			0.0	9.4		
22			0.0	9.5		
23			0.0	9.6		
24			0.0	9.9		
25			0.0	9.9		
26			0.0	10.5		
27	SP		0.0	9.9	Brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
28						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: E21- DL34

Date Drilled: 8/3/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
29	SP		0.0	9.6	Brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
30			1.6	9.8		
30			1.1	9.7		
31	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 30.5' bgs on 8/3/04 Groundwater not encountered Boring backfilled to grade with clean sand on 8/13/04 On-Site radiological samples collected every foot from 18-29'. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 	
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F19 - DL07

Date Drilled: 9/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
10							BACKFILL Soil previously excavated to 12' bgs and backfilled	
11								
12								
13	SP		30	18	0.0	11.8	Light brown, fine to medium SAND , some coarse sand, trace coarse gravel, medium dense, moist Trace coarse sand	
14								
15								
16	SW		22	20	0.0	11.8	Light orange-brown, fine to coarse SAND , some fine gravel, medium dense, moist	
17								
18	SP		27	22	0.0	11.5	Light orange-brown, fine to medium SAND , some coarse sand, trace fine gravel, medium dense, moist	
19								
20	SW		18	22	0.0	11.7	Light orange-brown, fine to coarse SAND , some fine gravel, medium dense, moist	
21	SP		12	18	0.0	11.8	Orange-brown, fine to medium SAND , some coarse sand and fine gravel, trace coarse gravel, medium dense, moist Tan, some medium sand, coarse sand and gravel grade out	
22								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F19 - DL07

Date Drilled: 9/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
23	SP						Orange-brown, fine to medium SAND, some coarse sand and fine gravel, trace coarse gravel, medium dense, moist	
23	SW		27	20	0.0	12.0	Light orange-brown, fine to coarse SAND, some fine gravel, medium dense, moist	
24							Orange-brown, fine to medium SAND, some coarse sand and fine gravel, medium dense, moist	
25			25	20	0.0	11.7		
26							Light brown, trace coarse sand, gravel grades out	
27			24	22	0.0	12.8	Brown, some coarse sand and fine gravel	
28	SP							
29			22	20	0.0	12.2		
30							Light brown, trace coarse sand and fine gravel Light brown to tan	
31			26	20	0.0	11.7	Some coarse sand and fine gravel	
32	EOB							
33							NOTES: 1. Boring completed to a depth of 32' bgs on 9/10/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/16/04 4. Analytical samples: a. On-Site radiological samples at every foot from 12-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
34								
35								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F19 - DL08

Date Drilled: 9/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kc ppm)	Description	Remarks
13							BACKFILL Soil previously excavated to 16' bgs and backfilled	
14								
15								
16								
17			16	21	0.0	12.1	Light brown, fine to coarse SAND , trace fine gravel, medium dense, dry 2-3" gravelly layers at 17' and 17.8'	
18	SW						Some fine gravel	
19			24	24	0.0	11.8		
20								
21	SP						Brown, fine to medium SAND , trace silt and fine gravel, medium dense, dry	
22	SW		18	21	0.0	11.8	Light brown, fine to coarse SAND , some fine gravel, medium dense, dry	
23	SP						Light brown, medium to coarse SAND , medium dense, dry	
24	SW		11	18	0.0	11.6	Light brown, fine to coarse SAND , some fine to coarse gravel, medium dense, dry	
25			22	24	0.0	12.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F19 - DL08

Date Drilled: 9/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
26		[Lithologic symbol: fine to coarse sand with gravel]					Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, dry Light brown, trace fine gravel, coarse gravel grades out	
27			23	18	0.0	11.8	Some fine gravel	
28	SW							
29			27	24	0.0	11.8		
30							Brown, trace fine gravel	
31	SP	[Lithologic symbol: sand with gravel]	26	20	0.0	11.6	Light brown, fine to medium SAND , some fine gravel, medium dense, dry	
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/10/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 9/14/04 4. Analytical samples: a. On-Site radiological samples at every foot from 16-29' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL19

Date Drilled: 9/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
16							BACKFILL Soil previously excavated to 18' bgs and backfilled to 2' below surface	
17			4	20	0.0	---		
18							Brown, fine to medium SAND , some coarse sand, trace fine to coarse gravel, medium dense, moist	
19			20	23	11.4	11.7		
20								
21	SP		16	19	4.0	12.1	Coarse sand layer from 21-21.2'	
22								
23			20	18	0.0	12.1	Coarse gravel at 23'	
24							Trace fine gravel, coarse sand grades out	
25	SW		20	23	0.0	12.0	Light brown, fine to coarse SAND , trace fine gravel, medium dense, moist	
26							Dark brown to brown, fine to medium SAND , medium dense, moist	
27	SP		22	21	0.0	11.9	Brown to light brown Brown, some coarse sand and fine gravel	
28								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL19

Date Drilled: 9/7/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
29	SP		28	24	0.0	12.1	Brown, fine to medium SAND , medium dense, moist	
30							Some coarse sand, trace fine to coarse gravel	
31			22	21	0.0	12.1		
32	EOB						NOTES: 1. Boring completed to a depth of 32' bgs on 9/7/04 2. Groundwater not encountered 3 Boring backfilled to grade with clean soil on 9/7/04 4. Analytical samples: a. On-Site radiological samples at every foot from 18-30' bgs b. SP sample at 30' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33								
34								
35								
36								
37								
38								
39								
40								
41								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F20 - DL20

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
21					Open excavation Soil previously excavated to 23' bgs		
22							
23					Tan to light brown, fine to coarse SAND , trace gravel, moist		
24			0.1	13.6			
25			0.2	13.7			
26			0.2	12.9			
27	SW		2.4	11.6			
28			1.2	13.1		Some gravel	
29			1.5	13.2			
30			0.9	13.5			
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 24-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel		
32							
33							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: F21 - DL35

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
21					Open Excavation Soil previously excavated to 23' bgs	
22						
23					Light brown to tan, fine to coarse SAND , some to trace gravel, moist	
24			0.1	12.2		
25			0.2	12.3		
26			0.2	12.1		
27	SW		0.2	12.3		
28			0.5	11.9		
29			0.1	12.2		
30			0.6	12.4		
31	EOB					
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL09

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
16					Open Excavation Soil previously excavated to 18.5' bgs	
17						
18						
19	SW				Light brown to tan, fine to coarse SAND, trace gravel, moist	
20			0.5	12.9		
21			0.5	12.9	Some dark brown to 21'	
22			0.7	13.0		
23			0.5	12.6		
24			0.5	12.6		
25			1.6	12.9		
26			0.1	13.0		
27			0.3	12.8		
28			1.5	13.5	Some gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL09

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
29	SW		1.7	12.3	Light brown to tan, fine to coarse SAND , trace gravel, moist	
30			2.0	13.2	Some gravel	
30			1.3	13.0	Trace gravel	
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 19-29'. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL10

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks	
18					Open excavation Soil previously excavated to 18' bgs		
18	SW		1.2	14.3	Tan, fine to coarse SAND , some fine to coarse gravel, moist		
19			1.7	13.8	Coarse gravel grades out		
20			2.1	14.0			
21			2.2	14.3			
22			4.3	13.9			
23			4.9	14.1			
24			7.7	14.1		Light brown	
25			19.6	14.0			
26			14.9	14.2		Coarse gravel grades out	
27							
28	SP		20.0	14.3	Light brown, medium to coarse SAND , some fine to coarse gravel, moist		
29			12.0	14.4			
30	SW		10.2	14.1	Light brown, fine to coarse SAND , some fine to coarse gravel, moist		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G19 - DL10

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
31	SW		9.6	14.6	Light brown, fine to coarse SAND , some fine to coarse gravel, moist	
32	EOB				NOTES: 1. Boring completed to a depth of 31' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 18-29'. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL01 (1)

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 26' bgs	
25						
26					Tan, fine to coarse SAND , some fine gravel, moist	
27						
28	SW		0.3	17.2		
29			2.2	15.9		
30			0.5	17.3	Trace cobbles	
31	SP		1.5	15.6	Tan to light tan, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	First SP sample collected at 31' on 7/12/04. Based on results of radiological analysis, the SP sample was converted to a DL sample and the boring continued.
32			0.0	20.2	Light brown, fine to coarse SAND , some gravel, trace cobbles, moist	
33		4.1	17.4			
34	SW	3.6	16.9			
35		3.1	18.2			
36		3.0	18.7			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL01 (1)

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
37	SW		5.3	18.2	Light brown, fine to coarse SAND , some gravel, trace cobbles, moist	Refusal at 37.7'; boring discontinued
			6.1	18.3		
38	EOB				Notes: 1. Boring completed to 37.7' bgs on 7/14/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 27-37'. SP/DL sample at 30.5' analyzed on and off Site for VOCs and radioactivity. Off-Site nickel sample collected from 37' Marinelli on 7/20/04	
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL02

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27	SW		0.1	21.8	Dark tan, fine to coarse SAND , some gravel, moist	
28			0.0	20.6	Dark tan, medium to coarse SAND , trace fine sand, moist	
29	SP		0.4	21.1	Fine to medium sand, some to trace fine gravel, coarse sand grades out	
30			0.5	20.2		
31			0.3	17.5		
32	EOB				NOTES: 1. Boring completed to a depth of 31.5' bgs on 7/12/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-30'. SP sample collected at 31', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL03

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	Boring completed to a depth of 31.5' bgs on 7/12/04 and first SP sample collected. Based on radiological results for first SP sample, boring was continued
27	SW		0.5	15.7	Tan, fine to coarse SAND , some to trace fine gravel and cobbles, moist	
28	SP		0.5	16.2	Tan, fine to medium SAND , trace gravel, moist	
29	SW		0.8	16.8	Tan, fine to coarse SAND , trace gravel, moist	
30			1.8	16.4		
31			0.5	16.5	Tan, fine to medium SAND , trace coarse sand and fine gravel, moist	
32	SP		0.1	16.5	Light brown to tan, medium to coarse sand, trace gravel, fine sand grades out	
33			1.2	15.4		
34			1.1	16.7		
35			0.3	16.4	Tan with trace green tint to 36', fine to coarse SAND , some gravel, moist	
36	SW		0.6	15.6		
37			1.6	15.7		
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL03

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	SW		3.1	16.0	Tan, fine to coarse SAND , some gravel, moist	
39	SP		1.3	17.1	Tan, fine to medium SAND , trace gravel, moist	
40	EOB					Refusal at 40' bgs; boring discontinued
41					NOTES: 1. Boring completed to 40' bgs on 7/15/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4 On-Site radiological samples collected every foot from 27-39.5'. SP samples collected at 31' and 39', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel	
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL04

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27					Light brown, medium to coarse SAND , trace fine gravel, moist	
28	SP		0.0	16.4		
29			2.5	16.3	Fine to medium sand, coarse sand grades out	
30			3.0	16.8	Medium to coarse sand, trace gravel, fine sand grades out	
31	SW		2.7	16.2	Light brown, fine to coarse SAND , trace fine to coarse gravel and cobbles, moist	First SP sample collected on 7/12/04 at 31'. Based on results of radiological analysis of sample, boring was continued on 7/13/04
32			1.2	15.7	Light brown, medium to coarse SAND , some fine sand, some to trace gravel, moist	
33			1.5	17.4		
34			2.0	16.2		
35	SP		0.4	16.5		
36			0.0	15.9		
37			1.9	15.2	Gravelly, some silt	
38			1.6	17.4		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL04

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
39			0.0	15.6	Light brown, gravelly, medium to coarse SAND , some silt, moist	Second SP sample collected on 7/13/04 at 40'. Based on results of radiological analysis of sample, boring was continued on 7/15/04	
40	SP		1.5	15.7			
41			4.5	16.5	Brown, trace gravel		
42	SW		0.0	16.4	Brown, fine to coarse SAND , some gravel, trace cobbles, moist		
43			0.0	17.1	Light brown, fine to medium SAND with intermittent lenses of light tan, fine sand, moist		
44			0.0	18.6			
45	SP		1.3	18.5			
46			1.6	16.9	Tan to light tan		
47	SC		0.5	17.1			
48			0.1	18.6	Tan, clayey, fine SAND , moist		Third SP sample collected at 47' on 7/15/04. Based on results of radiological analysis of sample, boring was continued on 7/16/04
49	CL		2.1	19.4	Tan, sandy CLAY , moist		
50	SP		1.2	21.5	Light brown, fine to medium SAND , some gravel, trace coarse sand and clay, moist		
51			0.3	18.9			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL04

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
52	SP		0.5	19.4	Light brown, fine to medium SAND , some gravel, trace coarse sand and clay, moist	Final SP sample collected at 52' on 7/16/04
			1.2	17.7		
53	EOB				NOTES: 1. Boring completed to 52.5' on 7/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 27-51'. SP samples collected at 31', 40', 47', and 52', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL05

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 26' bgs	
25						
26						
27					Tan, medium to coarse SAND , some gravel, trace fine sand, moist	
28			0.0	16.9		
29	SP		0.0	15.9		
30			0.0	16.7		
31			1.0	17.3	Fine to medium sand, coarse sand grades out	
32			1.2	16.1		
33			1.9	16.7		
34	SW		2.7	16.5	Light brown, fine to coarse SAND , trace gravel and cobbles, moist	
35			4.2	16.7		
36			4.1	16.6		

First SP sample collected at 31' bgs on 7/12/04. Based on results of radiological analysis, boring was continued on 7/14/04

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL05

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		2.7	16.5	Light brown, fine to coarse SAND , trace gravel and cobbles, moist	Refusal at 37.5'; second SP sample collected
			0.0	15.4		
38	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 37.5' bgs on 7/14/04 Groundwater not encountered Boring backfilled to grade with clean sand on 8/13/04 On-Site radiological samples collected every foot from 27-36'. SP samples collected at 31' and 37', analyzed on and off Site for radioactivity and VOCs, and off Site and nickel 	
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL06 (1)

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
25					Open excavation Soil previously excavated to 26' bgs	
26					Tan to light brown, medium to coarse SAND , trace fine sand and gravel, moist	First SP sample collected at 31'. Based on results of radiological analysis, boring was continued on 7/14/04
27	SP		0.5	19.9		
28			0.5	18.1	Tan, fine to coarse SAND , some gravel, trace white pasty material, moist	
29	SW		0.5	20.1		
30			1.0	19.3	Tan to light brown, fine SAND , some medium sand and gravel, moist	
31			3.0	15.2		
32	SP		0.6	17.2		
33			1.0	16.7	Trace white pasty material from 34-35'	
34			0.1	17.0		
35			1.3	17.5	Light brown to tan, fine to coarse SAND , some to trace gravel, trace white pasty material, moist	
36	SW		0.4	17.1		
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL06 (1)

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
38			0.5	17.3	Light brown to tan, fine to coarse SAND , some to trace gravel, trace white pasty material, moist	Refusal at 38.5'; SP sample collected	
			0.5	16.9			
39	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 38.5' on 7/14/04 Groundwater not encountered Boring backfilled to grade with clean sand on 8/13/04 On-Site radiological samples collected every foot from 27-37'. SP samples collected at 31' and 38', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel 		
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL07

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
25	SW		0.9	15.2	Brown to dark brown, fine to coarse SAND , some to trace fine to coarse gravel, moist	
26			1.1	14.5		
27			2.4	15.3		
28			1.6	13.6		
29			2.5	13.7		
30	SP		4.1	13.9	Light brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	
31			0.8	16.8		
32			0.0	14.0		
33	SW		0.7	14.3	Light brown, fine to coarse SAND , trace gravel, moist	
34			15	13.9		
35			3.0	13.7		
36						

First SP sample collected at 32' on 7/12/04. Based on results of radiological analysis of this sample, boring was continued on 7/20/04

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL07

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kopm)	Description	Remarks
37	SP		1.0	13.9	Brown, medium to coarse SAND , trace gravel, moist Trace dark brown Cobbles from 38.5-39' Tan, fine to medium sand, coarse sand grades out, moist	
38			2.8	14.5		
39			1.7	13.5		
40			0.5	13.7		
41	SW		2.1	13.7	Light brown, fine to coarse SAND , trace gravel, moist Cobbles	
42	SP		0.7	13.3	Tan, fine to medium SAND , moist Medium sand grades out, trace silt and clay	
43			1.1	13.4		
44			0.8	13.6		
45			3.3	13.4		
46			2.6	14.7		
47	CL		0.6	14.7	Light brown CLAY , trace fine sand, moist Fine sand lenses from 46.5-47	
48			1.2	14.1	Tan, fine sandy clay	
49			0.2	14.6		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL07

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
50	SP		0.0	14.6	Tan, fine SAND , trace silt, moist	
51	CL		0.1	15.1	Brown CLAY , moist	
51			0.4	14.5		
52	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 51.3' on 7/20/04 Groundwater not encountered Boring backfilled to grade with clean sand on 8/13/04 On-Site radiological samples collected every foot from 25-51'. SP samples collected at 51.3', analyzed on Site and off Site for radioactivity and VOCs, and off-Site for nickel 	
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL08

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 26' bgs	
25						
26					Brown, fine to coarse SAND , some to trace gravel, moist	
27	SW		0.0	14.9		
28			0.4	15.1		
29						
30			0.4	14.3	Brown, fine to medium SAND , trace gravel, trace white material to 37.5', moist	First SP sample collected at 31' on 7/13/04. Based on results of radiological analysis, boring was continued on 7/13/04
31			0.4	14.6		
32	SP		1.7	13.9		
33			3.6	15.5		
34			1.6	14.3		
35			1.2	14.2		
36			2.5	14.6		
					Some coarse gravel Trace coarse sand and coarse gravel	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL08

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37	SP		0.6	14.0	Brown, fine to medium SAND, trace coarse sand and gravel, moist	
38			1.7	14.0		
39			1.9	16.7		
40			0.6	15.4		
41			0.5	15.2		
42	SW		0.7	15.1	Brown, fine to coarse SAND, trace gravel, moist	Refusal encountered at 46.5'; SP sample thus collected directly from Marinelli taken at 46'
43	SP		1.0	14.8	Light tan, fine to medium SAND, moist	
44			0.1	15.8	Light tan with trace orange, medium sand grades out	
45			0.2	15.9		
46			0.0	15.7		
46	0.5	15.8				
47	EOB				NOTES: 1. Boring completed to 46.5' on 7/15/04 3. Groundwater not encountered 4. Boring backfilled to grade with clean sand on 8/13/04 5. On-Site radiological samples collected every foot from 27-46'. SP samples collected at 38' and 46', analyzed on Site and off Site for radioactivity and VOCs, and off-Site for nickel	
48						
49						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL09

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 25' bgs	
25					Tan to brown, fine to medium SAND , trace gravel, moist	
26	SP		0.3	15.8		
27			1.1	16.7	Tan to brown, fine to coarse SAND , some gravel, trace cobbles, moist	
28	SW		1.6	17.4		
29			2.2	17.4		
30	SP		4.5	17.0	Tan, fine to medium SAND , trace gravel, moist	First SP sample collected at 30' on 7/12/04. Based on results of radiological analysis of this sample, boring was continued on 7/19/04
31			0.2	17.9	Light brown, fine to coarse SAND , trace gravel and cobbles, moist	
32	SW		0.6	16.6		
33			3.5	15.7	Tan to light brown	
34			0.6	15.5	Tan, fine to medium SAND , trace fine gravel, moist	
35	SP		1.8	17.1		
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL09

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37	SP		1.1	17.4	Tan, fine to medium SAND , trace coarse sand and fine gravel, moist	
38	SW		1.3	16.8	Light brown, fine to coarse SAND , some gravel, moist	
39			0.8	16.6		
40			1.5	16.9	Light brown to brown	
41			3.5	16.6	Light brown	
42			6.4	17.3		
43	SP		9.1	16.9	Brown, medium to coarse SAND , trace fine gravel, moist	
44			3.1	18.1	Tan, fine to medium sand, trace coarse sand	
45			2.7	18.7	Trace gravel	
46			3.9	18.5		
47			3.7	17.9	Trace clay, medium sand grades out	
48	CL		3.9	17.8	Tan CLAY , some dark gray seams, moist	
49	SP		2.2	18.1	Tan, fine SAND , moist	
	CL				Tan CLAY , moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL09

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
50	SC		6.1	16.9	Tan, clayey, fine SAND, moist	
51	SP		3.2	17.8	Tan, fine SAND, trace clay, wet	
51	CL		2.0	18.4	Light brown, CLAY, trace sand, moist	
52	EOB				NOTES: 1. Boring completed to 51.5' bgs on 7/19/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. SP samples collected at 30' and 51', analyzed on Site for radioactivity and VOCs and off Site for nickel. SP sample at 51' also analyzed off Site for radioactivity	
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL10

Date Drilled: 8/10/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
44					BACKFILL Soil previously excavated to 44.5' bgs and backfilled to 24' bgs	No sample collected from 44.5-53'. Soil screened for VOCs and radioactivity during hand augering operations
45					Dark brown, medium to coarse SAND , trace fine gravel, trace white specks, moist	
46	SP				Light brown to dark tan, fine to medium sand, trace coarse sand and fine to coarse gravel, occasional cobbles and debris (from backfill above)	
47						
48						
49	CL				Brown to reddish brown, sandy CLAY with interlayers of brown, fine to medium sand to 49.5', moist	
50						
51					Brown to reddish brown, fine SAND , trace silt, moist	
52	SP					
53			0.2	11.3		
54	EOB				NOTES: 1. Boring completed to a depth of 53.5' bgs on 8/11/04 2. Groundwater not encountered 3. Boring backfilled with sand, cement and bentonite plug mixture to 46' and to grade with clean sand on 8/13/04 4. SP sample collected at 53', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
55						
56						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL21

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
27					Open excavation Soil previously excavated to 27' bgs	
27		[Dotted pattern]	2.0	13.3	Light brown, fine to coarse SAND , trace gravel, moist	
28	SW		25.0	13.4		
29		[Dotted pattern]	35.0	13.1	Light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
30	SP					
30	SW	[Dotted pattern]	10.0	12.7	Light brown, fine to coarse SAND , trace gravel, moist	
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G20 - DL22

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27	SW		6.4	16.6	Medium brown, fine to coarse SAND , moist	
28			35.0	16.8	Some light brown from 27-28'	
29			57.0	16.9	Some gravel from 28-30.5'	
30			4.0	16.4		
30			25.0	16.2	Trace cobbles at 30'	
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 26-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL01

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27	SP		0.0	12.8	Dark tan, fine to medium SAND , some to trace gravel, moist	
28					Dark tan, fine to coarse SAND , some to trace gravel, moist	
29	SW		1.2	12.3	Trace cobbles	
30						
31	SP		0.5	11.7	Dark tan, fine to medium SAND , trace gravel, moist	
31			0.3	12.2		
32	EOB				NOTES: 1. Boring completed to a depth of 31.5' bgs on 7/12/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-30'. SP sample collected at 31', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcps)	Description	Remarks
24					Open excavation Soil previously excavated to 27' bgs	
25						
26						
27	SP				Tan, fine to medium SAND , trace gravel, moist	
28	SW		0.3	13.2	Tan with some dark brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, trace white pastey material coincident with dark brown sand, moist	
29			0.3	14.2		
30						
31	SP		0.9	13.7	Tan, fine to medium SAND , trace gravel, moist	
32	SW		0.0	15.3	Tan to light brown, fine to coarse SAND , some gravel, trace white specks, moist	
33			0.5	16.1		
34			0.0	15.7		
35			0.5	14.9		
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpcm)	Description	Remarks
37	SP		1.5	15.1	Tan to light brown, fine to medium SAND , some gravel, trace white specks, moist	
					Trace coarse sand	
38	SW		0.0	15.6	Light brown, fine to coarse SAND , some gravel, moist	
39			0.9	15.2		
40			0.7	15.2	Light brown to medium brown	
41			0.2		Tan to dark brown	
42			0.7	15.3	Light brown	
43			SP	0.0	15.6	Tan to light brown, fine to medium SAND , some coarse sand and gravel, trace white specks, moist
44	0.0			15.2	Tan, trace coarse sand	
45	0.2			15.1	Trace gravel	
46	0.5			15.4		
47	1.7			15.0		
48	0.5	16.4		Some silt and fine to coarse gravel, trace clay		
49	0.7	14.8		Some medium sand, trace silt and gravel, clay grades out		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
50	SP		0.7	16.4	Tan to light brown, fine to medium SAND , some silt, trace clay and fine to coarse gravel, moist	
			1.5	15.9		
51	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 50.5' bgs on 7/19/04 Groundwater not encountered Boring backfilled to grade with clean sand on 8/13/04 On-Site radiological samples collected every foot from 28-49'. SP sample collected at 50', analyzed on and off Site for radioactivity and off Site for nickel 	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL03

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
23					Open excavation Soil previously excavated to 26' bgs	
24						
25						
26	SP				Tan, fine to medium SAND , trace gravel, moist	Boring completed to 31.5' on 7/13/04 and first SP sample collected. Based on radiological results for SP sample, boring was continued on 7/14/04
27					Light tan, fine to coarse SAND , some gravel, trace cobbles, moist	
28			0.4	15.6		
29			0.4	16.9		
30			0.9	15.3		
31	SW		6.5	16.3	Light brown, trace white pasty material	
32			0.5	16.5		
33			0.1	15.6		
34			0.0	16.3		
35			0.0	15.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL03

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
36	SW		0.6	15.6	Light brown, fine to coarse SAND , some gravel, trace cobbles and white pasty material, moist	Boring completed to 39.5' on 7/14/04 and second SP sample collected. Based on radiological results for SP sample, boring was continued on 7/15/04
37			1.8	15.5		
38			1.5	14.8		
39	SP		1.0	15.1	Dark brown, medium to coarse SAND , some gravel, trace white pasty material, moist	
40			1.2	17.3	Brown, fine to medium sand, some coarse sand, trace gravel and cobbles	
41			0.7	17.9	Dark tan	
42			0.5	16.3		
43			2.1	15.4		
44			2.6	15.7	Tan, trace medium sand and fine gravel	
45			1.9	15.4		
46	CL		4.2	14.5	Light brown, sandy CLAY , some fine sand lenses, moist	Boring completed to 45' on 7/14/04 and third SP sample collected. Based on radiological results for sample, boring was continued on 7/16/04
47			1.2	16.7		
48			0.7	15.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL03

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
49	CL		1.4	16.3	Light brown, sandy CLAY , some fine sand lenses, moist	
			0.6	16.5		
50					NOTES: 1. Boring completed to a depth of 49' on 7/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site radiological samples collected every foot from 27- 49'. SP samples collected at 31', 39', and 45', analyzed on and off Site for VOCs, and off Site for nickel. SP sample at 45' also analyzed off Site for radioactivity	
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL04 (1)

Date Drilled: 7/15/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 26' bgs	
25						
26					Light brown, medium to coarse SAND , trace fine gravel, moist Fine to medium sand, trace gravel Some gravel	NA = Not available (PID and rad data not recorded)
27			NA	NA		
27			0.2	14.7		
28			0.3	14.9		
29			1.2	14.6		
30	SP		0.6	15.5		
31			1.4	15.5		
32			1.7	14.5		
33			0.9	14.3		
34			0.4	15.0		
35	SW		1.8	14.6	Brown, fine to coarse SAND , some gravel, trace cobbles, trace white specks, moist	
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL04 (1)

Date Drilled: 7/15/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
37	SW		0.8	15.2	Brown, fine to coarse SAND, some fine to coarse gravel, trace cobbles, moist		
			0.6	14.6	Some fine to coarse gravel		
38							
			1.0	14.6	2-3" dark brown, coarse sand layer, wet		
39							
			1.5	15.3			
40							
	0.5	15.0					
41							
	0.8	14.9		Light brown, trace orange coloring, little fine to coarse gravel			
42	SP				Tan, fine SAND, moist		
			1.7	14.9	Light brown to tan, fine to medium sand, trace fine to coarse gravel		
43							
			2.7	15.5			
44							
	1.8	15.6					
45					Tan, medium sand, gravel and cobbles grade out		
	3.3	15.7					
46	SC				Light brown, clayey SAND to fine sandy, clay, trace gravel, moist		
			1.4	16.2			
47	SP				Tan to light brown, fine to medium SAND, trace fine to coarse gravel, moist		
			1.6	15.3			
48	SC				Light brown, clayey SAND to fine sandy, clay, trace gravel, moist		
			1.3	16.6			
49							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL04 (1)

Date Drilled: 7/15/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
50	SC		0.9	16.2	Light brown, clayey SAND to fine sandy, clay, trace gravel, moist	
50	EOB					
51					NOTES: 1. Boring completed to a depth of 49 8' on 7/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 8/13/04 4. On-Site RAD (DL) samples collected every foot from 27-49'; Off-Site nickel sample collected from DL sample at 49' on 7/20/04.	
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL05

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 26.5' bgs and backfilled to 24' bgs	
22						
23						
24					BACKFILL	
25						
26						
27					Light brown with trace dark brown, fine to coarse SAND , trace fine to coarse gravel, trace white pastey material, occasional cobbles, moist	
28	SW					
29						
30			0.4	14.3		First SP sample collected at 30' on 8/9/04. Based on radiological results for this sample, boring was continued on 8/12/04
31					Light brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	
32	SP					
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL05

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34	SP				Light brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	
35			0.0	13.2		
35	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 39' bgs on 8/12/04 Groundwater not encountered Boring backfilled with clean soil on 8/12/04 SP samples collected at 30' and 35', analyzed on and off Site for radioactivity and VOCs, and off Site for nickel 	<p>Second SP sample collected from 35' on 8/12/04. Refusal at this depth prevented further advancement of this borehole.</p>
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL06

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
22					Open excavation Soil previously excavated to 30.5' bgs and backfill to 24' bgs	
23						
24					BACKFILL	No samples collected from 24-30', 32-34', 36', 37', 39', and 41-47'. Soil screened for radioactivity and VOCs during hand augering operations
25						
26						
27						
28						
29						
30						
31			0.3	10.2	Light brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	First SP sample collected at 31' on 8/9/04. Based on radiological results for this sample, boring was continued on 8/11/04
32	SP					
33						
34						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL06

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
35	SP				Light brown, fine to medium SAND , trace coarse sand and fine to coarse gravel, moist	Second SP sample collected from 38' on 8/11/04. Based on radiological results for this sample, boring was continued on 8/12/04
36	SW				Dark brown, gravelly, fine to coarse SAND , occasional cobbles, moist (sheen on grains)	
37					Light brown, fine to medium SAND , trace fine to coarse gravel, moist	
38			0.8	NA	Cobble and coarse gravel layer at 38'	
39						
40						
41	SP				Trace bright orange at 41.5'	
42						
43						
44					Trace bright orange, fine sand at 44'	
45						
46	CL				Brown, some clay, moist, with interlayers (2-3" each) of brown, silty clay	
47						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL06

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
48	SP		0.0	11.2	Brown, fine to medium SAND , some clay, moist, with interlayers (2-3" each) of brown, silty clay, moist	Refusal at 48.3'; end of boring
49	EOB					
50					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 48.3' bgs on 8/12/04 Groundwater not encountered Boring backfilled with sand, cement and bentonite plug mixture to 43' and to grade with clean sand on 8/13/04 Off-Site nickel samples collected at 35', 40', and 46'. SP samples collected at 31', 38', and 48', analyzed on Site for radioactivity and VOCs, and off Site for nickel. SP sample at 48' also analyzed off Site for radioactivity 	
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL07

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 26.5' bgs and backfilled to 24' bgs	No samples collected from 26.5-30'. Soil screened for VOCs and radioactivity during augering operations
25				BACKFILL		
26						
27					Brown, fine to coarse SAND , trace fine to coarse gravel, trace white pastey material, moist	
28	SW					
30			0.1	13.7		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 8/9/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. SP sample collected at 30', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
32						
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21- DL08

Date Drilled: 8/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31					BACKFILL Soil previously excavated to 35' bgs and backfilled to 24' bgs	
32						
33						
34						
35	SP		0.2	11.3	Brown, fine to medium SAND , trace fine gravel, moist	
36	EOB					
37						
38						
39						
40						
41						
42						
43						

NOTES:

1. Boring completed to a depth of 35.5' bgs on 8/9/04
2. Groundwater not encountered
3. Boring backfilled to grade with clean sand on 8/13/04
4. SP sample collected at 35', analyzed on and off Site for radioactivity and VOCs and off Site for nickel

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: G21 - DL36

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks
25					Open excavation Soil previously excavated to 25' bgs	
26	SW		0.4	12.1	Light brown, fine to coarse SAND , some gravel, moist	
27			0.7	11.4		
28			1.7	11.1		
29			0.8	11.2	Trace gravel from 29-30.5'	
30			0.8	11.5		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 26-29'. SP sample collected at 30', analyzed on Site and off-Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H19 - DL11

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
17					Open excavation Soil previously excavated to 17' bgs	
18					Tan, fine to coarse SAND , moist	
19			0.0	13.8		
20			0.4	14.2		
21			0.2	13.9	Trace gravel	
22			0.0	13.6	Some gravel	
23			1.4	13.7		
24	SW		1.4	14.0		
25			1.2	14.0	Tan to light brown	
26			2.3	13.3		
27			0.0	13.5	Occasional cobbles	
28			2.2	13.8		
29			2.0	14.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H19 - DL11

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
30	SW		4.6	14.0	Tan to light brown, fine to coarse SAND , trace fine gravel, moist	
			10.0	13.8		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 18'-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H19 - DL12

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
17					Open excavation Soil previously excavated to 17' bgs	
18		[Dotted pattern]			Tan, fine to medium SAND , trace coarse	
19			1.1	13.7	Trace gravel	
20	SP		1.3	13.8		
21			0.0	14.6		
22			0.0	15.1		
23				0.0	15.0	
24		[Dotted pattern]	0.0	15.1	Light brown to tan, fine to coarse SAND with gravel, moist	
25	SW		0.0	14.3	Light brown	
26			1.4	15.3	Gravel grades out	
27	SP		2.6	14.4	Tan, fine to medium SAND , trace coarse sand, moist	
28		[Dotted pattern]	1.8	14.1	Tan, fine to coarse SAND with fine gravel, moist	
29	SW		4.1	15.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H19 - DL12

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
30	SW		2.8	15.1	Tan, fine to coarse SAND , trace fine gravel, moist	
31	SP		2.1	14.6	Tan, fine to medium SAND , trace coarse sand and fine gravel, moist	
31	EOB					
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						

NOTES:
 1. Boring completed to a depth of 30.5' bgs on 7/30/04
 2. Groundwater not encountered
 3. Boring backfilled to grade with clean sand on 8/13/04
 4. On-Site radiological samples collected every foot from 18'-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL01

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
25	SW		0.2	15.2	Brown, fine to coarse SAND , some gravel, trace cobbles, moist	
26			0.8	13.9		
27			0.5	14.3		
28			1.8	14.3		
29	SP		3.0	14.9	Brown, fine to medium SAND , trace fine gravel and cobbles, moist	
30			3.2	13.9		
31			0.7	15.3		
31			0.0	17.4		
32	EOB				NOTES: 1. Boring completed to a depth of 31.5' bgs on 7/12/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 26-30'. SP sample collected at 31', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
26			-	-	Tan to light brown, fine to medium SAND , trace gravel, moist	
27			0.5	16.9		
28			1.4	17.3		
29			1.0	16.7	Trace cobbles at 29'	
30			1.7	16.2		
31	SP		0.2	16.0		
32			1.0	15.0		
33			3.3	15.1	Tan, trace medium sand and fine gravel	
34			3.8	15.9	Brown, fine to medium sand, some coarse gravel, trace cobbles	
35			2.4	15.4	Trace gravel	
36			3.3	15.4		
37			3.3	15.4		
38					Dark brown, coarse sand layer with white specks from 37.8-38.2'	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
39	SP		3.1	15.2	Brown, fine to medium SAND , trace fine gravel and cobbles, moist Fine, some gravel, some to trace medium sand	
40			3.1	15.5		
41			4.5	15.6		
42			1.2	15.1		
43			1.2	14.9		
44			1.9	15.8		
45			SW			
46	1.8	17.3				
47	2.3	16.9				
47	SC				Tan to orange-tan, clayey SAND	
48	EOB					
49					NOTES: 1. Boring completed to a depth of 31' bgs on 7/12/04, and SP sample collected, boring continued to 47.25' on 7/19/04 and SP sample collected 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-46' bgs. On-Site VOC sample collected at 31' bgs. Off-Site nickel sample collected at 30' and 46' bgs.	
50						
51						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
25						BACKFILL Soil previously excavated to 28' bgs and backfilled	
26						Light brown, fine to medium sand, trace fine gravel, moist	
27							
28							
29	SW		9	24	6.4	Brown, fine to coarse SAND , some gravel, loose, moist	
30							
31			9	24	6.8		
32							
33			10	24	6.0	Light brown, fine to medium SAND , some fine gravel, medium dense, moist	
34	SP					Tan to light brown, trace fine gravel	
35			10	24	5.5		
36							
37			12	24	7.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039
Project: Cell 9 Drilling Program
Client: GTEOSI, Hicksville, NY
Log of Boring: H20- DL03
Date Drilled: 9/23/04
Sampler Type: 3-inch split spoon driven by 300-lb hammer
Logged By: Brian Stoudt, Chris Ortolano



Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
38	SP					Tan to light brown, fine to medium SAND , trace fine gravel, medium dense, moist	
39	SW		12	24	4.5	Brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
40						Dark brown discoloration	
41	SP		12	24	8.5	Brown, fine to medium SAND , some fine gravel, medium dense, moist	
42							
43	SW		15	24	5.8	Brown to dark brown, fine to coarse SAND , some fine gravel, medium dense, moist	
44							
45	SP		14	24	3.5	Light brown, fine to medium SAND , trace fine gravel, medium dense, dry	
46	SW					Brown, fine to coarse SAND , some fine gravel, medium dense, dry	
47	SP					Light brown, fine to medium SAND , medium dense, moist	
47	SC		14	24	1.6	Brown to light brown, clayey fine SAND , medium dense, moist	
48	SP					Light brown to tan, fine to medium SAND , medium dense, moist	
49	SM		14	24	7.5	Interbedded brown, silty fine SAND with clay lenses and tan to light brown, fine to medium sand, medium dense, moist	
50							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
51	SP					Brown, fine to medium SAND , some silt, medium dense, moist	
51	CL		21	24	2.4	Brown, silty CLAY , very stiff, moist	
52	SW					Brown, fine to coarse SAND , some fine gravel and silt, medium dense, moist	
53	CL		30	24	3.9	Light brown, silty CLAY , very stiff, moist	
53	SW					Light brown, fine to coarse SAND , some fine gravel, dense, moist	
54							
55			33	20	5.5	Tan, fine to medium SAND , dense, moist	
56						Medium dense	
57			13	16	3.8		
58	SP						
59			20	24	6.6		
60						Medium dense, light brown layer from 60-60.2'	
61			15	20	2.8		
62							
63			21	24	5.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20- DL03

Date Drilled: 9/23/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Brian Stoudt, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Description	Remarks
64	SP	[Stippled pattern]	30	24	5.2	Tan, fine to medium SAND , medium dense, moist Orange-brown layer from 63.7-63.8'	
65							
66	EOB					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 66' bgs on 9/24/04 Groundwater not encountered Boring backfilled to grade with clean sand on 9/28/04 Analytical samples collected from 28-63': <ol style="list-style-type: none"> On-Site radiological every foot On-Site nickel every odd-numbered foot SP sample collected at 64', analyzed on and off Site for radioactivity, VOCs, and nickel 	
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL23

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24 bgs'	
25	SP	[stippled pattern]	4.7	14.9	Light brown, fine to medium SAND , trace gravel, moist	
26			4.1	14.5	Some gravel	
27	SW	[stippled pattern]	5.8	14.7	Light brown, fine to coarse SAND , some gravel, moist	
28	SP	[stippled pattern]	16.4	15.0	Light brown, fine to medium SAND , trace coarse sand, moist	
29					Light brown, fine to coarse SAND , trace gravel, moist	
30	SW	[stippled pattern]	14.4	14.9		
			13.8	14.5		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 25-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H20 - DL24

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24 bgs'	
25	SW		2.9	15.6	Light brown, fine to coarse SAND , trace gravel, moist	
26			4.5	15.6		
27			6.5	16.4	Light brown, fine to medium SAND , trace coarse sand, moist	
28	SP		10.2	15.7	Trace gravel	
29			12.6	15.7		
30	SW		18.8	15.9	Light brown, fine to coarse SAND , trace fine gravel, moist	
31	EOB					
32					NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 25'-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL01

Date Drilled: 7/9/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
25					Open excavation Soil previously excavated to 25' bgs	
26	SW		0.1	21.8	Light brown, fine to coarse SAND , trace gravel, moist	
27			2.4	20.6		
28			0.0	20.6		
29			0.4	21.1		
30			0.5	20.2		
31	SP		0.3	17.5	Brown, fine to medium SAND , some to trace gravel, moist	
32			1.1	24.7		
33	EOB				NOTES: 1. Boring completed to a depth of 32.5' bgs on 7/12/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 26-31'. SP sample collected at 32', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
34						
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL02

Date Drilled: 7/12/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27	SP				Light brown, fine to medium SAND , trace gravel, moist	
28			1.0	20.6	Light brown, fine to coarse SAND , some gravel, trace cobbles, moist	
29			0.0	20.6		
30	SW		0.6	21.1		
31			1.4	20.2		
31			1.0	17.5		
32	EOB				NOTES: 1. Boring completed to a depth of 31.5' bgs on 7/13/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-30'. SP sample collected at 31', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL03

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
26					Open excavation Soil previously excavated to 26' bgs	
27					Light brown, fine to coarse SAND , some to trace gravel, moist	
28	SW		0.9	23.4		
29			0.3	24.0		
30			0.9	23.7		
31			0.8	23.0		
31			8.2	22.4	Trace dark brown at 31'	
32	EOB				NOTES: 1. Boring completed to a depth of 31.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 27-30'. SP sample collected at 31', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL04

Date Drilled: 7/30/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Jackson



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcps)	Description	Remarks
25					Open excavation Soil previously excavated to 25 bgs'	
26	SW		0.0	12.2	Light brown to tan, fine to coarse SAND , trace gravel, moist Some gravel	
27			0.2	11.3		
28			0.0	11.5		
29			0.2	11.3		
30			0.2	11.8		
30			0.0	11.9		
31	EOB				NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 25'-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
32						
33						
34						
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 9 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: H21 - DL37

Date Drilled: 7/29/04

Sampler Type: Stainless steel hand auger

Logged By: Aimee Clark



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
25					Open excavation Soil previously excavated to 25' bgs	
26	SW		0.2	16.7	Light brown, fine to coarse SAND , trace gravel, moist	
27						
28	SP		0.0	16.4	Light brown, fine to medium SAND , trace coarse sand and fine gravel, moist	
29						
30	SW		0.5	16.8	Light brown, fine to coarse SAND , trace gravel, moist	
31	EOB					
32					NOTES: 1. Boring completed to a depth of 30.5' bgs on 7/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 8/13/04 4. On-Site radiological samples collected every foot from 26-29'. SP sample collected at 30', analyzed on Site and off Site for radioactivity and VOCs, and off Site for nickel	
33						
34						
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: 119 - DL01

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 15' bgs	
15					Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
16		SW	0.0	11.5		
17			0.0	11.3		
18			0.0	11.3		
19			0.0	11.3		
20			0.0	11.9		
21			0.0	10.8		
22			0.0	10.8		
23			0.0	11.0		
24			0.0	10.9		
25			0.0	10.9		
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I19 - DL01

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SP		0.0	11.2	Light brown, fine to medium SAND with gravel, trace cobbles, moist	
28			0.0	10.5		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/29/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 16-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I19 - DL02

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 16' bgs	
15						
16					Brown, fine to coarse SAND with gravel, trace cobbles, moist	
17			0.0	10.9		
18	SW		0.0	10.5		
19			0.0	10.6	Light brown from 19-20'	
20			0.0	10.7		
21			0.0	11.2		
22	SP		0.0	11.0	Tan to light brown with trace dark brown, fine to medium SAND , trace gravel, moist	
23			0.0	11.2	Light brown, fine to coarse SAND and GRAVEL , trace cobbles, moist	
24	GW		0.0	10.8	Tan to light brown	
25			0.0	10.5		
26						

Project No.: NYSDEC: V-00089; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I19 - DL02

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
27	GW		0.0	10.5	Tan to light brown, fine to coarse SAND and GRAVEL , trace cobbles, moist	
28			0.0	11.2		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 4/1/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 17-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I20 - DL11

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	13.0	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
21			0.0	13.3		Light brown to tan from 21-22'
22			0.0	13.0		
23	SW		0.0	12.5		
24			0.0	12.7		
25			0.0	13.1		
26			0.0	13.5		
27			0.0	12.3		
28	EOB					NOTES: 1. Boring completed to a depth of 27' bgs on 4/1/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 20-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I20 - DL12

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	10.9	Light brown, fine to coarse SAND , trace gravel, moist	
21			0.0	11.1		
22	SW		0.0	11.4		
23			0.0	11.1		
24			0.0	11.2		
25			0.0	11.3		
26			0.0	10.6		
27			0.0	11.1		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/31/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 20-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I21 - DL01

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
22					Open excavation Soil previously excavated to 22' bgs	
23		[Stippled Lithologic Symbol]			Light tan, fine to medium SAND , some gravel, trace silt, moist	
24	SP		0.0			
25			0.0			
26	EOB					
27					NOTES: 1. Boring completed to a depth of 25.5' bgs on 3/17/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 23-24'; on-Site and off-Site radiological and VOCs and off-Site nickel at 25'	
28						
29						
30						
31						
32						
33						
34						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I21 - DL02

Date Drilled: 3/17/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
22					Open excavation Soil previously excavated to 22' bgs	
23		[Stippled Lithologic Symbol]	0.0		Light tan, fine to medium SAND , some grave, trace silt, moist	
24	SP		0.0			
25			0.0			
26	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 3/17/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 23-24'; on-Site and off-Site radiological and VOCs and off-Site nickel at 25'	
27						
28						
29						
30						
31						
32						
33						
34						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I21 - DL03

Date Drilled: 3/30/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
23					Open excavation Soil previously excavated to 24' bgs	
24					Light brown, fine to medium SAND , some coarse sand, trace gravel, moist	
25	SP		0.0	13.4		
26					Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
27			0.0	13.9		
28	SW		0.0	14.3		
29			0.0	14.3		
30					Light brown to dark brown, cobbles grade out from 29-30'	
31	EOB					
32					NOTES: 1. Boring completed to a depth of 31' bgs on 3/30/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 25-29'; on-Site and off-Site radiological and VOCs and off-Site nickel at 30'	
33						
34						
35						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: I22 - DL01

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
24	SW		0.0	12.5	Light brown, fine to coarse SAND , some gravel, moist	
25	SP		0.0	12.6	Tan to light brown, fine to medium SAND , trace gravel, moist	
26	SW		0.0	12.4	Light brown, fine to coarse SAND , some gravel, moist	
27						
28			0.0	12.6	Light brown, medium to coarse SAND , some fine gravel, trace fine sand	
29	SP		0.0	12.3		
30			0.0	12.7	Fine sand, trace coarse sand and gravel	
31			0.0	12.8		
31	EOB					
32					NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological (DL) at one foot intervals from 24-29'. SP sample at 30', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
33						
34						
35						
36						

Project No.: NYSDEC: 00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI Hicksville, NY

Log of Boring: I22 - DL02

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
24	SP		0.0	12.5	Reddish brown to brown, medium to coarse SAND , some gravel, trace fine sand, moist	
25			0.0	12.3		
26	SW		0.0	12.6	Brown, fine to coarse SAND , some gravel, moist	
27			0.0	12.6		
28			0.0	12.6		
29			0.0	12.5		
30			0.0	12.2		
31						
32					NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 24-29'; on-Site and off-Site radiological and VOCs and off-Site nickel at 30'	
33						
34						
35						
36						

Project No.: NYSDEC: 00089-1/ URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: 122 - DL03

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kopm)	Description	Remarks
23					Open excavation Soil previously excavated to 24' bgs	
24			0.0	12.2	Light brown, medium to coarse SAND , some gravel, trace fine sand, moist	
25	SP		0.0	12.4	Light brown	
26			0.0	12.3	Light brown, fine to coarse SAND , some gravel, moist	
27			0.0	12.4		
28	SW		0.0	12.2		
29			0.0	12.9	Light brown, fine to medium SAND with gravel, trace coarse sand, moist	
30	SP		0.0	-		
31						
32					NOTES:	
33					1. Boring completed to a depth of 31' bgs on 3/25/04	
34					2. Groundwater not encountered	
35					3. Boring backfilled to grade with clean sand	
					4. Analytical samples collected: on-Site radiological every foot from 24-28'; off-Site radiological at 29'	

Project No.: NYSDEC: 00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J19 - DL03

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 16' bgs	
15						
16					Light brown, fine to coarse SAND , some gravel, trace cobbles, moist	
17			0.0	10.4		
18			0.0	10.5		
19			0.0	10.5		
20			0.0	10.9		
21	SW		0.0	10.5		
22			0.0	10.6		
23			1.8	10.5		
24			1.0	10.5		
25			0.0	10.5		Brown
26						

Project No.: NYSDEC: 00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J19 - DL03

Date Drilled: 4/1/04

Sampler Type: Stainless steel hand auger

Logged By: Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
27	SW		0.0	10.9	Brown, fine to coarse SAND with gravel, trace cobbles, moist	
28			0.0	10.6		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 4/1/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 17-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J19 - DL04

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 16' bgs	
15						
16	SW				Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
17					Light brown and tan, fine to medium SAND , trace coarse sand, gravel and cobbles, moist	
18	SP		0.0	9.6		
19					Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
20	SW		0.0	9.8		
21	SP		0.0	9.6	Light brown, fine to medium SAND , trace coarse sand, gravel and cobbles, moist	
22					Light brown, fine to coarse SAND with gravel, trace coarse sand and cobbles, moist	
23			0.0	9.8		
24			0.0	9.6		
25	SW		0.0	9.7		
26			0.0	9.6		
			0.0	9.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J19 - DL04

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SW		0.0	9.7	Light brown, fine to coarse SAND with gravel, trace coarse sand and cobbles, moist	
28	EOB		0.0	0		
29					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/31/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 17-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J20 - DL13

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	10.0	Light brown, fine to coarse SAND , trace gravel, moist	
21			0.0	10.3		
22	SW		0.0	10.4		
23			0.0	10.4		
24			0.0	10.4		
25			0.0	10.6		
26			0.0	10.5		
27			0.0	10.5		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/31/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 20-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						

Project No.: 27010-039-007
Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J20 - DL14

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
 13th Floor
 New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpr)	Description	Remarks
18					Open excavation Soil previously excavated to 18' bgs	
19			0.0	9.4	Light brown, fine to coarse SAND , trace gravel, moist	
20			0.0	9.7		
21	SW		0.0	9.6	Some gravel from 21-25'	
22			0.0	9.8		
23			0.0	9.6		
24			0.0	9.6		
25			0.0	9.8		
26			0.0	9.8	Light brown to tan, fine to medium SAND , trace coarse sand and gravel, moist	
27	SP		0.0	9.5		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 4/1/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 19-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J22 - DL01

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
24	SW		0.0	12.9	Light brown, fine to coarse SAND , some gravel, moist	
25			0.0	14.3		
26			0.0	14.2		
27			0.0	14.0		
28			0.0	14.0		
29			0.0	13.8		
30			SP			0.0
31	EOB					
32					NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 24-28'; off-Site radiological at 29'	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: J22 - DL02

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
24	SW		0.0	14.8	Brown, fine to coarse SAND , some gravel, moist	
25			0.0	14.9	Brown, fine to medium SAND , trace coarse sand and gravel, moist	
26	SP		0.0	15.3		
27			0.0	15.1	Brown, fine to coarse SAND with gravel, moist	
28	SW		0.0	14.9		
29			0.0	14.6		
30			0.0	15.1		
31	EOB					
32					NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 24-29'; on-Site and off-Site radiological and VOCs and off-Site nickel at 30'	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL05

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Robert Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 15' bgs	
15					Light brown, gravelly, fine to coarse SAND , trace gravel, moist	
16			0.0	10.0		
17			0.0	9.7		
18			0.0	9.7		
19	SW		0.0	9.6		
20			0.0	9.5		
21			0.0	9.6		
22			0.0	9.9		
23			0.8	9.7		
24	GP		0.5	9.9		Dark brown to brown, coarse SAND and GRAVEL , some medium sand, trace fine sand and cobbles, moist
25					Light brown to brown, fine to coarse SAND and GRAVEL , trace cobbles, moist	
26	GW		1.7	9.8		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL05

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Robert Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	GW		0.8	9.9	Light brown to brown, fine to coarse SAND and GRAVEL , trace cobbles, moist	
28			0.5	9.7		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/31/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 16-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: 27010-039-007

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL06

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Robert Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 15' bgs	
15					Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
16	SW		0.0	9.2		
17			0.0	9.2		
18			0.0	9.3		
19						
20	SP		0.0	9.2	Brown, fine to medium SAND , trace coarse sand, gravel, and cobbles, moist	
21	SW		0.0	9.3	Brown to red, fine to coarse SAND with gravel, trace cobbles, moist	
22			0.0	9.5	Light brown from 21-22'	
23			0.0	9.0		
24			0.0	9.3		
25			0.0	9.2		
26			0.0	9.1		

Project No.: 27010-039-007

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL06

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Robert Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
27	SW	[Dotted pattern]	0.0	9.3	Brown to red, fine to coarse SAND with gravel, trace cobbles, moist	
28			0.0	9.2		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/31/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 16-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL07

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 14' bgs	
15			0.0	9.3	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
16			0.0	9.4		
17			0.0	9.2		
18			0.0	9.1		
19	SW		0.0	9.1		
20			0.0	9.3		
21			0.0	9.3		
22			0.0	9.1		
23			0.0	9.1		
24			0.0	9.1		
25			0.0	9.4	Trace dark brown from 22-23'	
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K19 - DL07

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SP		0.0	9.4	Brown, fine to medium SAND , trace coarse sand, gravel, and cobbles, moist	
28			0.0	9.5		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/31/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 15-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K20 - DL15

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 18' bgs	
15						
16					Light brown, fine to coarse SAND , trace gravel, moist	
17						
18						
19	SW		0.0	9.8		
20			0.0	9.5		
21			0.0	9.5		
22			0.0	9.7		
23			0.0	9.8		
24			0.0	9.7		
25			0.0	9.5		
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K20 - DL15

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW	[Dotted pattern]	0.0	9.4	Light brown, fine to coarse SAND , trace gravel, moist	
28			0.0	9.2		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/31/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 19-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: NYSDEC: V-00089-1; URS: 27010-039

Log of Boring: K20 - DL16

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
18					Open excavation Soil previously excavated to 18' bgs	
19					Light brown, fine to coarse SAND , trace gravel, moist	
20			0.0	9.6	Light brown to tan from 19-22'	
21			0.0	9.5		
22			0.0	9.6		
23			0.0	9.5	Some gravel from 22-24'	
24	SW		0.0	9.3		
25			0.0	9.5		
26			0.0	9.7		
27			0.0	9.4		
28			0.0	9.3		
29	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/31/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 19-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
30						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K20 - DL17

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 17' bgs	
15						
16					Light brown, fine to coarse SAND with gravel, moist	
17						
18	SW		0.0	9.1		
19			0.0	9.0		
20			0.0	9.4		
21			0.0	9.2		
22			0.0	9.2		
23			0.0	9.1		
24			0.0	9.1		
25			0.0	10.0		
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K20 - DL17

Date Drilled: 3/31/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SW	[Dotted pattern]	0.0	9.1	Light brown, fine to coarse SAND with gravel, moist	
28			0.0	8.9		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/30/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 18-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: K22 - DL02

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open excavation Soil previously excavated to 24' bgs	
24	SW		0.0	10.6	Brown, fine to coarse SAND with gravel, moist	
25			0.0	11.1		
26			0.0	10.8		
27			0.0	10.9		
28			0.0	10.7		
29			0.0	10.9		
30			0.0	10.8		
31	EOB				NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 24-29'; on-Site and off-Site radiological and VOCs and off-Site nickel at 30'	
32						
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L19 - DL08

Date Drilled: 3/30/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
13					Open excavation Soil previously excavated to 13' bgs	
14	SW		0.0	9.6	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
15						
16	SP		0.0	9.8	Brown, fine to medium SAND with gravel, trace coarse sand and cobbles, moist	
17						
18			0.0	9.6	Light brown to brown, fine to coarse SAND with gravel, trace cobbles, moist	
19			0.0	9.6		
20	SW		0.0	9.3		
21			0.0	9.7		
22			0.0	9.6		
23			0.0	9.7		
24			0.0	9.6		
25			0.0	9.5		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L19 - DL08

Date Drilled: 3/30/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26	SW		0.5	9.5	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
27			0.5	9.6		
28			5.4	9.5		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/30/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 14-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L19 - DL09

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
13					Open excavation Soil previously excavated to 13' bgs	
14			0.0	9.6	Light brown, fine to coarse SAND with gravel, moist	
15			0.0	9.7		
16			0.0	9.7	Light brown to brown from 17-18'	
17	SW		0.0	9.4		
18			0.0	9.6		
19			0.0	9.3		
20			0.0	9.5		
21			0.0	9.3		
22			0.0	9.4		
23			0.0	9.3		
24			0.0	9.4		
25						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L19 - DL09

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26	SW		0.0	9.6	Light brown, fine to coarse SAND with gravel, moist	
27			0.0	9.7		
28			0.0	9.7		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/30/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 13-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L20 - DL18

Date Drilled: 3/30/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14					Open excavation Soil previously excavated to 15' bgs	
15					Light brown, fine to coarse SAND , trace gravel, moist	
16			0.0	-	Dark brown, medium to coarse layer from 16.2-16.5'	
17			0.0	-		
18			0.0	-		
19			0.0	9.0		
20	SW		0.0	9.2		
21			0.0	9.3		
22			0.0	9.2		
23			0.0	9.0		
24			0.0	9.0		
25			0.0	9.1		
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L20 - DL18

Date Drilled: 3/30/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27	SW		0.0	8.9	Light brown, fine to coarse SAND , trace gravel, moist	
28			0.0	9.2		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/30/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 16-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L20 - DL19

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
27	SP		0.0	9.4	Brown, fine to medium SAND with gravel, some coarse sand, trace cobbles, moist	
28			0.0	9.4		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand on 4/1/04 4. Analytical samples collected: on-Site radiological every foot from 15-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L22 - DL03

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
17					Open excavation Soil previously excavated to 21' bgs	
18						
19						
20						
21					Brown, fine to coarse SAND , trace gravel, moist	
22	SW		0.0	10.1	Dark brown with red, some gravel	
23			0.0	10.7	Brown to dark brown, fine to medium SAND , trace coarse sand and gravel, moist	
24	SP		0.0	10.5		
25			0.0	10.4	Brown, fine to coarse SAND with gravel, moist	
26			0.0	10.3		
27	SW		0.0	10.5		
28			0.0	10.4		
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: L22 - DL03

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
30	SW		0.0	10.3	Brown, fine to coarse SAND with gravel, moist	
31			0.0	10.5		
31	EOB				NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 22-29'; SP sample at 30', analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M19 - DL10

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
12					Open excavation Soil previously excavated to 12' bgs	This boring log is based on the Sample Collection Log from 3/29/2004. A field boring log was not completed for this location
13			0.0	10.6	NO DATA	
14			0.0	10.7		
15			0.0	10.4		
16			0.1	10.7		
17			0.0	10.9		
18			0.0	10.5		
19			0.0	10.5		
20			0.0	10.4		
21			0.2	10.5		
22			0.1	10.4		
23			0.0	10.2		
24			0.0	10.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M19 - DL10

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
25			0.0	9.6	NO DATA	This boring log is based on the Sample Collection Log from 3/29/2004. A field boring was not completed for this boring, so no soil descriptions exist.
26			0.0	9.7		
27			0.0	9.7		
28			0.0	9.5		
28	EOB				NOTES: 1. Boring completed to a depth of 28' bgs on 3/29/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 12-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27'	
29						
30						
31						
32						
33						
34						
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M20 - DL20

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
13					Open excavation Soil previously excavated to 13' bgs	
14			0.0	9.4	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
15			0.0	9.4		
16			0.0	9.6		
17	SW		0.0	9.7		
18			0.0	9.7		
19			0.0	9.8		
20			0.0	9.7		
21			0.0	9.8		
22			0.0	9.7		
23			0.0	9.9		
24			0.0	9.8		
25						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M20 - DL20

Date Drilled: 3/29/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
26	SW		0.0	9.9	Light brown, fine to coarse SAND with gravel, trace cobbles, moist	
27			0.0	9.7		
28			0.0	9.8		
28	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 28' bgs on 3/29/04 Groundwater not encountered Boring backfilled to grade with clean sand Analytical samples collected: on-Site radiological every foot from 14-26'; on-Site and off-Site radiological and VOCs and off-Site nickel at 27' 	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						

Project No.: NYSDEC: 00089-1; URS: 27010-039

Project: Cell 10 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M22 - DL01

Date Drilled: 3/25/04

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano, Chris Ortolano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 21' bgs	
22	SW		0.0	10.3	Brown, fine to coarse SAND with gravel, moist	
23			0.0	10.5		
24			0.0	10.3	Brown, fine to medium SAND with coarse sand, trace gravel, moist	
25			0.0	10.4		
26	SP		0.0	10.9		
27			0.0	10.4		
28			0.0	10.4		
29	SW		0.0	10.5	Brown, fine to coarse SAND with gravel, moist	
30			0.0	10.1		
31			0.0	10.5		
32	EOB				NOTES: 1. Boring completed to a depth of 31' bgs on 3/25/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean sand 4. Analytical samples collected: on-Site radiological every foot from 21-29'; on-Site and off-Site radiological and VOCs and off-Site nickel at 30'	
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M19 - DL01

Date Drilled: 3/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 14' bgs	
12								
13							BACKFILL	
14								
15								
16							Light tan, fine gravelly, fine to coarse SAND , medium dense, dry	
17								
18								
19			20	22	0.0	3.0		
20							With fine to coarse gravel, trace cobbles	
21	SW		23	24	0.0	3.7		
22								
23			27	19	0.0	3.7		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M19 - DL01

Date Drilled: 3/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, dry	
25			26	21	0.0	4.1		
26							Tan, fine SAND , medium dense, dry Little medium to coarse sand	
27	SP							
28			28	24	0.0	4.0	Little fine to coarse gravel	
29			26	21	0.0	4.3		
30	SW						Tan, fine gravelly, fine to coarse SAND , occasional cobbles, medium dense, dry Little cobbles, dense	
31			31	23	0.0	4.2		
32	SP						Tan, fine gravelly, fine to medium SAND , dense, dry	
33	SW						Tan, fine gravelly, fine to coarse SAND , little cobbles, dense, dry	
34								
35	SP						Tan, fine to medium SAND , little coarse sand, dense, dry	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M19 - DL01

Date Drilled: 3/9/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		39	19	0.0	3.9	Tan, fine to coarse gravelly, fine to coarse SAND , dense, dry	
38								
39	GP		44	22	0.0	9.2	Tan, fine to medium SAND and fine GRAVEL , dense, dry	
40								
40	EOB						NOTES: 1. Boring completed to a depth of 40' bgs on 3/10/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 3/15/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-39' bgs b. SP sample at 40', analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M20 - DL10

Date Drilled: 3/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 15' bgs	
12								
13								
14							BACKFILL	
15								
16								
17							Tan, fine to medium SAND , trace gravel and cobbles, loose, moist Increasing gravel content with depth Some coarse sand and fine to coarse gravel, medium dense	
18								
19			9	22	0.0	2.9		
20								
21	SP		12	23	0.0	3.4		
22							Coarse gravel grades out	
23			17	24	0.0	3.1		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M20 - DL10

Date Drilled: 3/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine gravelly, fine to coarse SAND, medium dense, moist	
25			20	24	0.0	3.1	Tan, fine to medium SAND, some coarse sand, some to trace fine to coarse gravel and cobbles, medium dense	
26							Some medium sand, trace fine gravel, coarse sand and coarse gravel grades out	
27	SP		25	24	0.0	3.2		
28								
29			19	24	0.0	3.2	Fine gravelly, fine to medium sand Trace coarse sand and fine to coarse gravel	
30							Light brown, coarse sand grades out	
31	SW		20	22	0.0	3.5	Tan, fine gravelly, fine to coarse SAND, trace cobbles, medium dense, moist	
32	SP						Tan, fine to medium SAND, trace fine gravel, medium dense, moist Tan to light brown, trace cobbles	
33			30	24	0.0	2.6		
34	SW						Tan, fine to coarse SAND, some fine to coarse gravel, trace cobbles, medium dense, moist	
35	SP		28	22	0.0	2.7	Light brown to tan, fine to medium SAND, some coarse sand and fine gravel, trace cobbles, medium dense, moist	
36	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: M20 - DL10

Date Drilled: 3/12/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		38	24	0.0	3.2	Tan, fine to coarse gravelly, fine to coarse SAND , dense, moist	
39			32	20	0.0	3.2	Dark brown, discolored layer from 39-39.2'	
40	SP EOB						Tan, fine SAND , dense, moist	
41							<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 40' bgs on 3/12/04 Groundwater not encountered Boring backfilled to grade with clean soil on 3/15/04 Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 20-40' bgs on-Site and off-Site VOC sample collected at 40' bgs off-Site nickel sample collected at 40' bgs off-Site radiological sample collected at 40' bgs 	
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL02

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
11							Open Excavation Soil previously excavated to 19' bgs and backfilled to 14.5' bgs	
12								
13							BACKFILL	
14								
15								
16							Tan, fine to coarse gravelly, fine to coarse SAND , some cobbles to 20', medium dense, dry	
17								
18							Tan, fine to medium SAND , some coarse sand, medium dense, dry	
19			27	20	0.0	8.2		
20	SW						Tan, fine to coarse gravelly, fine to coarse SAND , occasional cobbles, medium dense, dry	
21								
22	SP		29	22	1.2	8.1		
23	SW							
24			23	24	2.0	8.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL02

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse gravelly, fine to coarse SAND, occasional cobbles, medium dense, dry	NA = Not available (recovery not recorded)
							Dense	
25	SP		32	22	2.0	8.2	Tan, fine to medium SAND, dense, dry	
26							Tan, fine to coarse SAND, some fine gravel, medium dense, moist	
27			27	22	0.5	8.1	Some fine to coarse gravel	
28							Gravelly, coarse gravel grades out, dry	
29	SW		23	NA	0.0	8.2		
30							Some fine gravel	
31			25	24	0.0	8.2		
32	SP						Tan, fine to medium SAND, trace coarse sand and gravel, medium dense, dry	
33	SW		30	24	0.0	8.3	Tan, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
34	SP						Tan, fine to medium SAND, some coarse sand, dense, dry	
35	SW		37	19	0.0	8.6	Tan, fine to coarse gravelly, fine to coarse SAND, some cobbles, dense, dry	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL02

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		32	19	0.0	8.0	Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, dry Dark brown to black from 37-37.5'	
38								
39	SP		26	24	0.0	8.7	Tan, fine to medium SAND , some coarse sand, medium dense, dry	
40	EOB						NOTES: 1. Boring completed to a depth of 40' bgs on 3/10/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 3/15/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs e. on-Site VOC and radiological samples collected at 38' bgs due to soil discoloration	
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-0008-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL03

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
12							Open Excavation Soil previously excavated to 20' bgs and partially backfilled to 15' bgs	
13								
14							BACKFILL	
15								
16								
17							Tan, fine to coarse gravelly, medium to coarse SAND , medium dense, moist	
18								
19								
20								
21	SP		17	21	0.0	9.1	Dense	
22								
23			38	18	0.0	8.9		
24								

Project No.: NYSDEC: V-0008-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL03

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
25	SW		28	22	0.0	8.8	Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	NA = Not available (recovery not recorded)
26								
27			26	22	0.0	8.2		
28								
29			21	24	0.0	8.5		
30								
31	SP		19	24	0.0	8.5	Tan, fine to medium SAND , some fine gravel, medium dense, dry	
32							Dense	
33			31	NA	0.0	8.4		
34	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, dry	
35			31	21	0.0	8.5		
36	SP						Tan, fine to medium SAND , some fine gravel, dense, dry	
37	SW		30	NA	0.0	8.5	Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, dry	

Project No.: NYSDEC: V-0008-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N19 - DL03

Date Drilled: 3/10/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
38	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, moist Dark brown to black from 37.4-38.2'	NA = Not available (recovery not recorded)
39	SP		36	NA	0.0	9.0	Tan, fine to medium SAND , trace fine gravel and cobbles, dense, dry	
40	EOB						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 40' bgs on 3/10/04 Groundwater not encountered Boring backfilled to grade with clean soil on 3/11/04 Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 20-40' bgs on-Site and off-Site VOC sample collected at 40' bgs off-Site nickel sample collected at 40' bgs off-Site radiological sample collected at 40' bgs 	
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL11

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 15' bgs	
12								
13								
14							BACKFILL	
15								
16								
17							Tan, fine to medium SAND , some coarse sand, trace fine to coarse gravel, medium dense, moist Coarse sand grades out Trace coarse sand	
18								
19			22	20	0.0	3.0		
20								
21	SP		17	19	0.0	3.0		
22							Some coarse sand	
23			22	24	0.0	3.2		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL11

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24							Tan, fine to medium SAND , some coarse sand and fine to coarse gravel, medium dense, moist	
25			29	24	0.0	3.2		
26							Trace cobbles from 25.5-26'	
27			22	24	0.0	2.8		
28								
29	SP		17	24	0.0	3.2		
30							Trace coarse sand and cobbles, dense	
31			31	24	0.0	3.1		
32							Some coarse sand, medium dense	
33			23	24	0.0	3.1		
34								
35	SW		32	22	0.0	3.2	Tan to brown, fine to coarse gravelly, fine to coarse SAND , some cobbles, dense, moist	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL11

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SP		39	24	0.0	3.1	Tan, fine to medium SAND , some coarse sand and fine to coarse gravel, trace cobbles, dense, moist	
38	SW						Dark brown, fine to coarse SAND and fine to coarse gravel, trace cobbles, dense, moist	
39	SP		33	24	0.6	2.8	Orange, gravelly	
40	EOB						Tan, fine SAND , trace fine gravel, dense, moist	
41							NOTES: 1. Boring completed to a depth of 40' bgs on 3/16/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 3/19/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs	
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL12

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 14' bgs	
12								
13							BACKFILL	
14								
15								
16							Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, dry	
17								
18							Tan, fine to medium SAND , some to trace fine to coarse gravel and cobbles, medium dense, dry	
19	SW		20	23	0.0	2.9		
20								
21			23	24	0.0	3.0		
22	SP							
23			19	21	0.0	2.8		

Project No.: NYSDEC: V-00089-1, URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL12

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
24	SP						Tan, fine to medium SAND , some coarse sand, some to trace fine to coarse gravel and cobbles, medium dense, dry	
25	SW		20	19	0.0	2.7	Tan, fine to coarse gravelly, fine to coarse SAND , trace clay and cobbles, medium dense, moist	
26	SP						Tan, fine to medium SAND , trace fine gravel, medium dense, moist Some fine to coarse gravel, trace cobbles	
27	SW		20	24	0.1	2.9	Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
29	SP		16	20	0.1	2.9	Tan, fine to medium SAND , trace fine to coarse gravel, medium dense, moist	
30	SW						Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
31			28	24	0.0	2.8	Tan, fine to medium SAND , some coarse sand and fine to coarse gravel, medium dense, moist	
32							Some medium to coarse sand, trace fine gravel, occasional cobbles	
33	SP		24	24	0.0	3.0		
34							Dense	
35			31	18	0.0	2.7		
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N20 - DL12

Date Drilled: 3/16/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
37	SP						Tan, fine to medium SAND, trace fine gravel, dense, moist	
37	SW		39	24	0.0	3.3	Dark brown to black (discolored), fine to coarse gravelly, fine to coarse SAND, dense, moist	
38							Tan, fine to medium SAND, some to trace fine to coarse gravel, dense, moist	
39	SP		40	24	0.0	3.0		
40	EOB							
41							NOTES: 1. Boring completed to 40' bgs on 3/16/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 3/19/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs	
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL02

Date Drilled: 1/20/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26						
27						
28						
28	SP		0.0	-	Light brown, gravelly, fine to medium SAND	
29			0.0	-		
30			0.0	-		
31			0.0	-		
31			0.0	-		
32	EOB				NOTES: 1. Boring completed to 31 5' bgs on 1/20/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31'	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL04

Date Drilled: 1/20/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to medium SAND , some gravel Slight increase in gravel content with depth	
27			0.0	-		
28			0.0	-		
29	SP		0.0	-		
30			0.0	-		
31			0.0	-	NOTES: 1. Boring completed to 31.5' bgs on 1/20/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31' bgs	
32	EOB					
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL05

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to medium SAND, some gravel, moist	
27			0.0	-		
28			0.0	-		
29	SP		0.0	-		
30			0.0	-		
31			0.0	-		
32	EOB				NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. on-Site VOC sample collected at 31' bgs c. off-Site radiological sample collected at 31' bgs	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL08

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to coarse SAND , some gravel, moist	
27			0.0	-		
28			0.0	-		
29	SW		0.0	-		
30			0.0	-		
31			0.0	-	NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31' bgs	
32	EOB					
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL09

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to coarse SAND , some gravel, moist	
27			0.0	-		
28	SW		0.0	-		
29			0.0	-		
30			0.0	-		
31			0.0	-		
32	EOB				NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31' bgs	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N21 - DL11

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to coarse SAND , some gravel, moist	
27			0.0	-		
28	SW		0.0	-		
29			0.0	-		
30			0.0	-		
31			0.0	-		
32	EOB				NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. on-Site VOC sample collected at 31' bgs c. off-Site radiological sample collected at 31' bgs	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N22 - DL01

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26						
27						
28						
28	SW		0.0	-	Light brown, fine to coarse SAND , some gravel, moist	
29			0.0	-		
30			0.0	-		
31			0.0	-		
31			0.0	-		
32	EOB				NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. on-Site VOC sample collected at 31' bgs c. off-Site radiological sample collected at 31' bgs	
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N22 - DL02

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to coarse SAND , some gravel, moist	
27			0.0	-		
28			0.0	-		
29	SW		0.0	-		
30			0.0	-		
31			0.0	-	NOTES: 1. Boring completed to 31 5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31' bgs	
32	EOB					
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: N22 - DL03

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24					Open Excavation Soil previously excavated 27' bgs	
25						
26					Light brown, fine to coarse SAND, some gravel, moist	
27			0.0	-		
28			0.0	-		
29	SW		0.0	-		
30			0.0	-		
31			0.0	-	NOTES: 1. Boring completed to 31.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 27-31' bgs b. off-Site radiological sample collected at 31' bgs	
32	EOB					
33						
34						
35						
36						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL01

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
19			0.3	-	BACKFILL	
20			0.5	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
21			0.2	-		
22			0.2	-		
23	SP		0.2	-		
24			0.4	-		
25			0.4	-		
26			0.2	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL04

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
11							Open Excavation Soil previously excavated to 20' bgs and partially backfilled to 15' bgs	
12								
13							BACKFILL	
14								
15								
16								
17							Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
18								
19								
20							Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
21			16	21	0.0	4.4		
22	SW							
23			24	24	0.0	4.5		

Project No.: NYSDEC V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL04

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse SAND, some fine gravel, medium dense, moist	
25			22	24	0.0	3.5	Tan, fine to medium SAND, some to trace fine gravel, occasional cobbles, medium dense, moist	
26	SP						Some fine to coarse gravel, cobbles grade out	
27			21	24	0.0	3.8		
28								
29	SW		20	23	0.0	3.6	Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	
30	SP						Tan, fine to medium SAND, some coarse sand, medium dense, moist	
31	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	
31	SP		21	22	0.0	3.3	Tan, fine to medium SAND, trace gravel, medium dense, moist	
32	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	
33	SP		24	24	0.0	3.9	Tan, fine to medium SAND, trace fine gravel and cobbles, medium dense, moist	
34								
35	SW		32	NA	0.2	3.9	Tan, fine to coarse SAND, some fine gravel, dense, moist Fine to coarse gravelly, trace cobbles	NA = Not available (recovery not recorded)
36								

Project No.: NYSDEC V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL04

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling, Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		30	24	0.0	3.9	Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, moist	
38							Dark brown grading to brown by 38'	
39	SP		25	22	0.8	4.0	Tan, fine to medium SAND , some to trace fine to coarse gravel and cobbles, medium dense, moist	
40	EOB						<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 40' bgs on 3/11/04 Groundwater not encountered Boring backfilled to grade with clean soil on 3/12/04 Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 21-40' bgs on-Site and off-Site VOC sample collected at 40' bgs off-Site nickel sample collected at 40' bgs off-Site radiological sample collected at 40' bgs 	
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL05

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 20' bgs and partially backfilled to 16' bgs	
12								
13								
14							BACKFILL	
15								
16								
17								
18							Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, dry	
19								
20							Tan, fine to medium SAND , some fine to coarse gravel, trace coarse sand and cobbles, medium dense, moist	
21	SW		11	20	0.0	3.9		
22							Tan, fine to medium SAND , some fine to coarse gravel, trace coarse sand and cobbles, medium dense, moist	
23	SP		16	24	0.0	3.9		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL05

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
24	SP						Tan, fine to medium SAND, some fine to coarse gravel, trace coarse sand and cobbles, medium dense, moist	
24	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	
25			22	20	0.0	3.6	Light brown, fine to medium SAND, some fine to coarse gravel, medium dense, moist	
26	SP						Light tan Dark tan	
27			20	19	0.0	3.3		
28	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist Dark tan, some fine to coarse gravel	
29			21	24	0.0	3.7	Tan, fine to medium SAND, trace fine gravel and cobbles, medium dense, moist	
30	SP						Cobbles grade out	
31			24	22	0.0	3.0		
32							Tan, fine gravelly, fine to coarse SAND, dense, moist	
33	SW		32	24	0.0	3.8		
34							Tan, fine to medium SAND, trace fine gravel, dense, moist	
35	SP		38	24	0.0	3.7		
36	SW						Tan, fine to coarse gravelly, fine to coarse SAND, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL05

Date Drilled: 3/11/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		21	16	0.0	4.0	Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
38			21	24	0.0	3.5		
39								
40	SP EOB						Tan, fine to medium SAND , moist	
41							<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 40' bgs on 3/12/04 Groundwater not encountered Boring backfilled to grade with clean soil on 3/17/04 Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 22-40' bgs on-Site and off-Site VOC sample collected at 40' bgs off-Site nickel sample collected at 40' bgs off-Site radiological sample collected at 40' bgs 	
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1/ URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL13

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 14' bgs	
12								
13								
14							BACKFILL	
15								
16								
17							Tan, fine to coarse SAND , some fine to coarse gravel and cobbles, medium dense, dry	
18								
19	SW		28	20	0.0	3.2		
20							Tan, fine to medium SAND , some coarse sand, medium dense, dry	
21	SP		26	24	0.0	3.1		
22	SW						Tan, fine to coarse SAND , some fine to coarse gravel and cobbles, medium dense, dry	
23			30	22	0.0	3.2		

Project No.: NYSDEC: V-00089-1/ URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL13

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse SAND, some fine to coarse gravel and cobbles, medium dense, dry	
25			24	22	0.0	3.2		
26	SP						Tan, fine to medium SAND, some coarse sand and fine gravel, medium dense, dry	
27	SW						Dense	
27			36	24	0.1	3.0	Tan, fine to coarse SAND, some fine to coarse gravel and cobbles, dense, dry	
28	SP						Tan, fine to medium SAND, some coarse sand and fine gravel, dense, dry	
29	SW						Tan, fine to coarse SAND, some fine to coarse gravel and cobbles, dense, dry	
30							Tan, fine to medium SAND, some coarse sand, trace fine gravel, dense, dry	
31	SP							
31	SW		37	22	0.0	3.3	Tan, fine to coarse SAND, some fine to coarse gravel and cobbles, dense, dry	
32							Tan, fine to medium SAND, some coarse sand, trace fine gravel, dense, dry	
33	SP						Medium dense	
33			29	23	0.0	3.1		
34	SW						Tan, fine to coarse SAND, some fine to coarse gravel and cobbles, dense, dry	
35							Tan, fine to medium SAND, some fine gravel, trace coarse sand and cobbles, dense, dry	
35	SP							
35			36	24	0.3	3.5		
36	GW						Dark brown, fine to coarse SAND and fine to coarse GRAVEL, some cobbles, dense, dry	

Project No.: NYSDEC: V-00089-1/ URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL13

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon with 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SP		42	23	0.2	3.4	Brown, fine to medium SAND, some coarse sand, dense, dry	
38	GW						Dark brown with black seam (1/4"), fine to coarse SAND and fine to coarse GRAVEL, dense, dry	
39	SP						Tan, fine to medium SAND, some coarse sand, medium dense, dry	
40	SW		27	22	0.3	3.3	Dark brown with red, fine to coarse SAND, some fine to coarse gravel, medium dense, dry	
40	SP						Tan, fine to medium SAND, some coarse sand, medium dense, dry	
40	EOB							
41							NOTES: 1. Boring completed to 40' bgs on 3/17/04 2. Groundwater not encountered 3. Boring backfilled with clean onsite backfill on 3/19/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs	
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL14

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 14' bgs	Original location of DL14 was moved approx 1-1.5' to the east because of overhead bracing beam interfering with drilling.
12								
13							BACKFILL	
14								
15								
16							Tan, fine to coarse SAND , some fine to coarse gravel and cobbles, medium dense, dry	
17								
18							Tan, fine to medium SAND , some coarse sand, trace fine to coarse gravel and cobbles, medium dense, dry	
19	SW		26	22	0.3	3.3		
20							Tan, fine to medium SAND , some coarse sand, trace fine to coarse gravel and cobbles, medium dense, dry	
21			15	22	0.2	3.3		
22	SP							
23			27	22	0.0	3.3		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL14

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24							Tan, fine to coarse SAND , some fine to coarse gravel and cobbles, medium dense, dry	
25	SW		26	23	0.0	3.1		
26							Dense	
27	SP		31	22	0.0	2.9	Tan, fine to medium SAND , some coarse sand, trace fine gravel, dense, dry	
28	SW						Tan, fine to coarse gravelly, fine to coarse SAND , some cobbles, dense, dry	
29	SP		32	24	0.0	3.0	Tan, fine to medium SAND , some coarse sand and fine gravel, dense, dry	
30								
31	SW						Tan, fine to coarse gravelly, fine to coarse SAND , some cobbles, dense, dry	
32	SP		42	23	0.0	3.2	Tan, fine to medium SAND , some coarse sand and fine gravel, dense, dry	
33								
34			34	22	0.0	3.1		
35	SW		39	23	0.0	3.0	Dark brown with black discoloration, fine to coarse gravelly, fine to coarse SAND , some to trace cobbles, dense, dry Brown from 34'	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O20 - DL14

Date Drilled: 3/17/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SW		46	24	0.0	3.1	Brown, fine to coarse gravelly, fine to coarse SAND , trace cobbles, dense, dry Black discoloration (2.5") at 36.5'; Red discoloration (2.5") at 36.8'	
38							Tan, fine to medium SAND , some coarse sand, trace fine gravel, dense, dry	
39	SP		44	24	0.0	2.9		
40	EOB						NOTES: 1. Boring completed to 40' bgs on 3/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 3/19/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs	
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL01

Date Drilled: 1/20/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
33					Open Excavation Soil previously excavated to 33' bgs	
34			0.0	-	No lithologic data available	
35			0.0	-		
36			0.0	-		
37			0.0	-		
38			0.0	-		
39			0.0	-		
40	SP		0.0	-	Light brown, fine to medium SAND , some gravel	
41			0.0	-		
42			0.0	-		
43			0.0	-	Trace silt	
44			0.0	-	Some well rounded gravel	
45			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL01

Date Drilled: 1/20/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
46	SP		0.0	-	Light brown, fine to medium SAND , some well rounded gravel	
47			0.0	-	Mix slightly darker sand, moist	
48			0.0	-		
48			0.0	-		
49	EOB				NOTES: 1. Boring completed to 48.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 40-48' bgs b. off-Site nickel sample collected at 48' bgs c. off-Site radiological sample collected at 48' bgs	
50						
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL02

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
34					Open Excavation Soil previously excavated 34' bgs	
34			0.0	-	Light brown, fine to medium SAND , some well rounded gravel and cobbles, trace silt, moist	
35			0.0	-		
36			0.0	-		
37			0.0	-		
38			0.0	-		
39	SP		0.0	-		
40			0.0	-		
41			0.0	-		
42			0.0	-		
43			0.0	-		Light tan
44			0.0	-		
45			0.0	-		
46						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL02

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
47	SP		0.0	-	Light tan, fine to medium SAND , some well rounded gravel and cobbles, trace silt, moist	
48			0.0	-		
48			0.0	-		
49	EOB				NOTES: 1. Boring completed to 48.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 34-48' bgs b. off-Site nickel sample collected at 48' bgs c. off-Site radiological sample collected at 48' bgs	
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL03

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
					Open Excavation Soil previously excavated 34' bgs	
34			0.0	-	Light brown, fine to coarse SAND , some well rounded gravel, trace silt, moist	
35			0.0	-	Light brown to red-brown	
36			0.0	-		
37			0.0	-		
38			0.0	-		
39	SW		0.0	-		
40			0.0	-		
41			0.0	-		
42			0.0	-		
43			0.0	-		
44			0.0	-		
45			0.0	-		
46						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL03

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47	SC		0.0	-	Light brown, clayey, fine to medium SAND with silt, moist	
48			0.0	-		
48	SP		0.0	-	Light brown, fine to medium SAND, some well rounded gravel, trace silt, moist	
49	EOB					
50					NOTES: 1. Boring completed to 48.5' bgs on 1/22/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 34-48' bgs b. off-Site nickel sample collected at 48' bgs c. on-Site VOC sample collected at 48' bgs d. off-Site radiological sample collected at 48' bgs	
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL04

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
					Open Excavation Soil previously excavated 34' bgs	
34			0.0	-	Light brown, fine to medium SAND , some coarse sand, dry	
35	SP		0.0	-	Trace silty clay	
36			0.0	-	Light brown, fine to coarse SAND , some fine gravel, dry	
37	SW		0.0	-		
38			0.0	-	Light brown, fine to medium SAND , some coarse sand, moist	
39	SP		0.0	-	Some fine gravel	
40	SW		0.0	-	Light brown, fine to coarse SAND , some fine gravel, trace cobbles, dry	
41			0.0	-	Light tan, fine to medium SAND , some coarse sand and fine to coarse gravel, dry	
42	SP		0.0	-	Some fine gravel	
43			0.0	-	Coarse sand and gravel grade out	
44			0.0	-	Light tan, silty, fine to medium SAND , moist	
45	SM		0.0	-	Light brown with brown, silty clay lenses, moist	
46						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL04

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47	SM		0.0	-	Light brown, silty, fine to medium SAND , some coarse sand, moist	
48	CL		0.0	-	Light brown, silty CLAY , some light brown and red-brown mottled, fine to medium sand, moist	
49	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to 48.5' bgs on 1/23/04 Groundwater not encountered Boring backfilled with clean soil Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 34-48' bgs off-Site nickel sample collected at 48' bgs on-Site and off-Site VOC samples collected at 48' bgs off-Site radiological sample collected at 48' bgs 	
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL05

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
					Open Excavation Soil previously excavated 34' bgs	
34	SP		0.0	-	Light brown, fine to medium SAND , some coarse sand and fine gravel, dry	
35			0.0	-	Light brown, fine to coarse SAND , some fine gravel, dry	
36	SW		0.0	-		
37			0.0	-		
38	SP		0.0	-	Light tan, fine to medium SAND , some coarse sand, dry	
39	SW		0.0	-	Light brown, fine to coarse SAND , some fine to coarse gravel and cobbles, dry	
40			0.0	-	Coarse gravel and cobbles grade out	
41	SP		0.0	-	Light brown, fine to medium SAND , some coarse sand, dry	
42	SW		0.0	-	Light brown, fine to coarse SAND , some fine gravel, dry	
43	SP		0.0	-	Light brown, fine to medium SAND , some coarse sand, dry	
44			0.0	-	Light tan	
45	CL		0.0	-	Some brown, silty clay, moist at 44.5'	
46	SP		0.0	-	Clay lens at 45' Trace coarse sand	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL05

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47	SP		0.0	-	Light tan, fine to medium SAND , dry Some brown, silty clay, moist at 46.5'	
48	CL		0.0	-	Light brown, silty CLAY , some fine to medium sand, moist	
48	SP		0.0	-	Light brown, fine to medium SAND , some silty clay, coarse sand, and fine gravel, moist	
49	EOB					
50					NOTES: 1. Boring completed to 48.5' bgs on 1/23/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 34-48' bgs b. on-Site and off-Site VOC samples collected at 48' bgs c. off-Site nickel sample collected at 48' bgs d. off-Site radiological sample collected at 48' bgs	
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL06

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
34					Open Excavation Soil previously excavated to 34' bgs	
34	SW		0.0	-	Light brown, fine to coarse SAND , some fine gravel, dry	
35			0.0	-		
36			0.0	-	Gravel grades out	
37			0.0	-		
38	SP		0.0	-	Light tan, fine to medium SAND , trace coarse sand, dry	
39			0.0	-	Some cobbles	
40			0.0	-	Some coarse sand	
41			0.0	-		
42			0.0	-		
43			0.0	-	Some gravel	
44			0.0	-	Coarse sand and gravel grades out	
45	CL		0.0	-	Silty clay lens	
45	CL/ML		0.0	-	Some coarse sand to fine gravel	
46			0.0	-	Silty clay/clayey silt lens, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL06

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
47	SP		0.0	-	Light brown, fine to medium SAND , some coarse sand to fine gravel, dry		
48	CL		0.0	-		Brown, silty CLAY to clayey silt, some fine to coarse sand, moist	
49	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to refusal at a depth of 47' bgs on 1/23/04, completed to 48.5' bgs on 1/26/04 Groundwater not encountered Boring backfilled with clean sand Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 34-48' bgs on-Site and off-Site VOC samples collected at 48' bgs off-Site nickel sample collected at 48' bgs off-Site radiological sample collected at 48' bgs 		
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL07

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34					Open Excavation Soil previously excavated to 34' bgs	
34-35	SW		0.0	-	Light brown, fine to coarse SAND , some fine gravel, dry	
35-36			0.0	-		
36-37			0.0	-		
37-38	SP		0.0	-	Light tan, fine to medium SAND , some coarse sand, dry	
38-39	SW		0.0	-	Light brown, fine to coarse SAND , some cobbles, dry	
39-40			0.0	-	Some fine gravel	
40-41			0.0	-	Gravel grades out	
41-42	SP		0.0	-	Light brown, fine to medium SAND , some coarse sand, dry	
42-43			0.0	-		
43-44			0.0	-		
44-45			0.0	-	Light tan	
45-46			0.0	-	Light brown, some silty clay, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL07

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
47	SM		0.0	-	Light brown, silty, fine to medium SAND , some coarse sand, dry	
47	SP				Light tan, fine to medium SAND , some coarse sand, dry	
47	EOB					
48					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to refusal at a depth of 47' bgs on 1/23/04 Groundwater not encountered Boring backfilled with clean soil Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 34-47' bgs on-Site and off-Site VOC samples collected at 47' bgs off-Site nickel sample collected at 47' bgs off-Site radiological sample collected at 47' bgs 	
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL08

Date Drilled: 1/26/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pittney, Brian Stoudt, Kyle Strumfels, Mark Gell, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
31					Open excavation Soil previously excavated to 36' bgs	
32						
33						
34						
35						
36						
37	SW		0.0	-	Red-brown, fine to coarse SAND , some fine to coarse gravel, moist	
38			0.0	-		
39	SP		0.0	-	Tan to light brown, fine to medium SAND , trace fine gravel, moist	
40	SW		0.0	-	Light brown, fine to coarse SAND , some fine to coarse gravel, moist	
41			0.0	-	Tan, fine to medium SAND , trace fine gravel, moist	
42	SP		0.0	-	Tan to light brown, trace coarse gravel	
43						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL08

Date Drilled: 1/26/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pittney, Brian Stoudt, Kyle Strumfels, Mark Gell, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
44	SP		0.0	-	Tan to light brown, fine to medium SAND , trace fine to coarse gravel, moist	
45			0.0	-		
46			0.0	-		
47			0.0	-		
48	SC		0.0	-	Light brown to tan, some silt and clay, gravel grades out	
49	CL		0.0	-	Light tan, clayey SAND , some silt and gravel, moist	
49			0.0	-	Light tan, silty CLAY , some fine sand, moist	
50	EOB				NOTES: 1. Boring completed to refusal at a depth of 45.8' bgs on 1/26/04, continued to 49.5' bgs on 1/27/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 36-49' bgs b. on-Site and off-Site VOC samples collected at 45' and 49' bgs c. off-Site nickel sample collected at 45' and 49' bgs d. off-Site radiological sample collected at 49' bgs	
51						
52						
53						
54						
55						
56						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL09

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
29					Open excavation Soil previously excavated to 35' bgs and backfilled to 29'	
30					BACKFILL	
31						
32						
33						
34						
35					Light brown to red, fine to coarse SAND , some fine to coarse gravel, moist	
36	SW		0.0	-		
37	SP		0.0	-	Red to orange, medium to coarse SAND , some fine to coarse gravel, moist	
38	SW		0.0	-	Light brown, fine to coarse SAND , some fine to coarse gravel, moist	
39					Tan, fine to medium SAND , trace fine gravel, moist	
40	SP		0.0	-		
41						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL09

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
42	SP		0.0	-	Tan, fine to medium SAND , trace fine gravel, moist	
43			0.0	-		
44			0.0	-		
45			0.0	-		
46			0.0	-		
47	ML		0.0	-	Tan to brown, SILT , some clay and sand, moist	
48	CL		0.0	-	Brown, silty CLAY , some sand, moist	
49			0.3	-		
49.5	EOB		0.0	-	Silty clay to sandy silt, trace coarse gravel from 49 - 49.5'	
50					NOTES: 1. Boring completed to a depth of 49.5 feet bgs on 1/26/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 36-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs	
51						
52						
53						
54						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL10

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
29					Open excavation Soil previously excavated to 36' bgs and backfilled to 29'bgs	
30					BACKFILL	
31						
32						
33						
34						
35						
36	GW		0.0	-	Light brown to dark brown grading to red-brown, fine to coarse SAND and GRAVEL , moist	
37			0.0	-	Orange-brown, fine to coarse SAND , some fine to coarse gravel, moist	
38	SW		0.0	-	Orange-brown to light brown, grading to tan	
39	SP		0.0	-	Tan, fine to medium SAND , trace fine gravel, moist	
40			0.0	-	Light brown to tan, fine to coarse SAND , some fine to coarse gravel, moist	
41	SW		0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL10

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
42	SW		0.0	-	Light brown to tan, fine to coarse SAND , some fine to coarse gravel, moist	
43	SP		0.0	-	Tan to light tan, fine to medium SAND , trace fine gravel and coarse sand, moist Orange-brown layer Coarse sand grades out Trace brown, silty clay	
44			0.0	-		
45			0.0	-		
46			0.0	-		
47			0.0	-		
48	ML		1.1	-	Light brown to brown, clayey SILT to silty CLAY , trace fine to coarse sand and fine gravel, moist	
49			2.0	-		
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 36-49' bgs b. on-Site and off-Site VOC sample collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs	
51						
52						
53						
54						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL11

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
27					Open Excavation Soil previously excavated to 27' bgs	
28					Light brown, fine to coarse SAND , some fine to coarse gravel, moist	
29						
30						
31	SW					
32						
33						
34						
35						
36					Dark brown, medium to coarse SAND , some fine gravel, moist	
37	SP					
38						
39	SW				Light brown, fine to coarse SAND , some fine to coarse gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL11

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
40	SW		0.0	-	Light brown, fine to coarse SAND, some fine to coarse gravel, moist	
41			0.0	-		
42			0.0	-		
43			0.0	-	Tan, little fine to coarse gravel	
44			0.0	-		
45			0.0	-		
46			0.0	-	Orange-tan, trace silt and clay	
47			0.0	-		
48			0.0	-		
49			EOB			
50						
51						
52						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL12

Date Drilled: 1/26/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
31					Open excavation Soil previously excavated to 36' bgs	
32						
33						
34						
35						
36					Brown, silty SAND	
37	SM		0.0	-	Some cobbles to 38'	
38			0.0	-		
39			0.0	-	Brown to reddish brown, SAND with gravel	
40			0.0	-	Tan, fine sand	
41	SP		0.0	-	Brown to red	
42			0.0	-		
43			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL12

Date Drilled: 1/26/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
44	SP		0.0	-	Light tan, fine SAND		
45			0.0	-			
46			0.0	-			
47			0.0	-			Light tan to light brown
48			0.0	-			Light tan, trace silt and clay
49			0.0	-			
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 1/26/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 36-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs		
51							
52							
53							
54							
55							
56							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL13

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34					Open excavation Soil previously excavated to 36' bgs and backfilled to 34'	
35		X			BACKFILL	
36						
37	SW	.	0.0	-	Light brown to brown, fine to coarse SAND , some fine to coarse gravel, moist	
38			0.0	-	Orange-brown	
39			0.0	-	Orange-brown to light brown, grading to tan, fine to medium sand	
40			0.0	-	Tan to light tan, fine to medium SAND , trace fine gravel, moist	
41			0.0	-	Coarse sand and gravel lens	
42	SP	.	0.0	-	Trace coarse sand and fine to coarse gravel	
43			0.0	-		
44			0.0	-		
45			0.0	-	Some fine to coarse gravel	
46						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL13

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
47	SP		0.0	-	Tan to light tan, fine to medium SAND , some fine to coarse gravel, moist	
48			2.3	-	Trace light brown, sandy silt seams from 46.5-47' Trace fine gravel, coarse gravel grades out	
49			0.6	-	Grading to light brown, fine sandy, silt	
49	CL		2.6	-	Light brown to brown, silty CLAY to fine sandy silt moist	
50	EOB					
51					NOTES: 1. Boring completed to a depth of 49.5' bgs on 2/2/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 36-49' bgs b. on-Site and off-Site VOC sample collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs	
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL14

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
34					Open excavation Soil previously excavated to 37' bgs and backfilled to 34'	
35					BACKFILL	
36						
37						
38	SW		0.0	-	Brown to light brown, fine to coarse SAND, some fine to coarse gravel, moist	
39			0.0	-	Brown to orange	
40	SP		0.0	-	Tan, fine to medium SAND, trace fine gravel, moist	
41			0.0	-	Tan to light brown, fine to coarse SAND, some fine to coarse gravel, moist	
42			0.0	-		
43	SW		0.0	-	Tan to light tan, trace fine to coarse gravel	
44			0.0	-		
45			0.0	-		
46			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O21 - DL14

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
47	SP		0.0	-	Tan to light tan, fine to medium SAND, trace fine to coarse gravel, moist	
48			0.3	-	Coarse gravel grades out Light brown, clayey silt to silty clay seams	
49			1.0	-	Grading to light brown to brown, silty clay	
49	CL		2.1	-	Light brown to brown, silty CLAY to clayey silt, trace fine gravel, moist	
50	EOB					
51					NOTES: 1. Boring completed to a depth of 49.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 37-49' bgs b. on-Site and off-Site VOC sample collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs	
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL01

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpr)	Description	Remarks	
35					Open Excavation Soil previously excavated to 37' bgs		
36							
37	SP		0.0	-	Light brown, fine to medium SAND , some well rounded gravel and cobbles, trace silt, moist		
38			0.0	-			
39			0.0	-			
40			0.0	-			
41			0.0	-			
42			0.0	-			
43			0.0	-			Light tan
44			0.0	-			
45			0.0	-			
46			0.0	-			
47							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL01

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
48	SP		0.0	-	Light tan, fine to medium SAND , some well rounded gravel and cobbles, trace silt, moist	
			0.0	-		
49	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 48.5 feet bgs on 1/23/04 Groundwater not encountered Boring backfilled with clean sand Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 37-48' bgs on-Site and off-Site VOC samples collected at 48' bgs off-Site nickel sample collected at 48' bgs off-Site radiological sample collected at 48' bgs 	
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL02

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
34					Open Excavation Soil previously excavated to 34' bgs	
34			0.0	-	Light brown, fine to medium SAND , some well rounded gravel, trace silt and cobbles, moist	
35			0.0	-		
36			0.0	-		
37			0.0	-		
38			0.0	-		
39			0.0	-		
40			0.0	-		
41	SP		0.0	-		
42			0.0	-		
43			0.0	-		
44			0.0	-	Light tan	
45			0.0	-		
46			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL02

Date Drilled: 1/22/04

Sampler Type: Stainless steel hand auger

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
47	SP		0.0	-	Light tan, fine SAND, trace silt and clay, moist	
48			0.0	-		
48			0.0	-		
49	EOB				NOTES: 1. Boring completed to a depth of 48.5' bgs on 1/22/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 34-48' bgs b. off-Site nickel sample collected at 48' bgs	
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL03

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 33' bgs	
34			0.0	-	Brown to light brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, moist	
35	SW		0.0	-	Orange-brown to light brown, cobbles grade out	
36			0.0	-		
37			0.0	-	Increasing gravel content with depth	
38			0.0	-	Light brown to tan, fine to medium SAND , some coarse sand and fine to coarse gravel, moist	
39			0.0	-		
40			0.0	-		
41	SP		0.0	-	Tan to light tan, trace fine gravel, coarse sand grades out	
42			0.0	-		
43			0.0	-		
44			0.0	-	Tan to light tan, little fine gravel, trace silt seams	
45			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL03

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
46	ML				Light brown to brown, clayey SILT , some tan, fine to medium sand, moist	
47	SP		0.0	-	Tan to light tan, fine to medium SAND , trace fine gravel, moist	
48	ML/ CL		0.0	-	Brown to light brown, clayey SILT to silty CLAY , moist	
49			0.0	-		
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 1/29/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 34-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site nickel sample collected at 49' bgs d. off-Site radiological sample collected at 49' bgs 5. Boring initially called P22-DL03, subcell was corrected to O22	
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL05

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
28					Open excavation Soil previously excavated to 28' bgs	
29					Light brown, fine to coarse SAND , some gravel	
30	SW					
31						
32						
33					Tan	
34					Reddish brown, fine to medium SAND , some gravel and cobbles	
35						
36			0.0	-		
37	SP		0.0	-	Trace white	
38			0.0	-		
39			0.0	-		
40			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL05

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels, Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
41	SM		0.0	-	Light brown to tan, silty, fine to coarse SAND , some gravel, moist	
42			0.0	-		
43			0.0	-		
44			0.0	-		
45			0.0	-		
46			0.0	-		
47	ML		0.0	-	Light brown, clayey SILT , some fine to medium sand, moist	
48			0.0	-	Light brown to tan	
49			0.0	-	Light brown, trace gravel	
49.5			0.0	-		
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 1/27/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 28-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site radiological sample collected at 49' bgs d. off-Site Nickel sample collected at 49' bgs	
51						
52						
53						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL06

Date Drilled: 1/27/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
29					Open excavation Soil previously excavated to 29' bgs	
30	SW		0.0	-	Light brown, fine to coarse SAND , some gravel	
31			0.0	-		
32			0.0	-		
33			0.0	-		
34			0.0	-		
35			0.0	-		
36			0.0	-		Gravel layer
37	SM		0.0	-	Red-brown, silty, fine to coarse SAND , some gravel, moist	
38			0.0	-	Red-brown to light brown	
39			0.0	-	Brown to yellow	
40			0.0	-		
41			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL06

Date Drilled: 1/27/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks	
42	SM		0.0	-	Brown to yellow, silty, fine to coarse SAND , some gravel, trace cobbles, moist		
43			0.0	-			
44			0.0	-			
45			0.0	-			Some clayey silt
46			0.0	-			
47			0.0	-			Light tan to brown, fine to medium
48	CL		0.0	-	Light tan to brown, silty CLAY , some fine to medium sand, trace gravel, moist		
49			0.0	-			
50	EOB				NOTES: 1. Boring completed to a depth of 36 feet bgs on 1/21/04, continued to a depth of 49.5 feet bgs on 1/27/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 29-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site radiological sample collected at 36' and 49' bgs		
51							
52							
53							
54							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL07

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
29					Open Excavation Soil previously excavated to 29' bgs	
30					BACKFILL Former trench box location	
31						
32						
33						
34						
35						
36						
37			0.0	-	Light brown to orange-brown, fine to coarse SAND , some fine to coarse gravel, moist	
38			0.0	-	Orange	
39	SW		0.0	-	Light brown, trace fine gravel, coarse gravel grades out	
40			0.0	-		
41			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL07

Date Drilled: 1/23/04

Sampler Type: Stainless steel hand auger

Logged By: Eliot Pitney, Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
42	SW		0.0	-	Light brown, fine to coarse SAND , trace fine gravel	
			0.0	-	Light brown to orange-brown, some coarse gravel	
43	SP		0.0	-	Light brown, fine to medium SAND , trace fine gravel, moist	
44			0.0	-		
45			0.0	-		
46	CL		0.0	-	Brown, silty CLAY , some fine to coarse sand, trace gravel, moist	
47	SP		0.0	-	Light brown, fine to medium SAND , trace fine gravel, moist	
48	CL		0.0	-	Brown, silty CLAY to clayey silt, some fine to coarse sand, moist	
49			0.0	-		
50	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to refusal at a depth of 48' bgs on 1/23/04, continued to 49.5' bgs on 1/26/04 Groundwater not encountered Boring backfilled with clean sand Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 36-49' bgs on-Site and off-Site VOC samples collected at 48' and 49' bgs off-Site nickel sample collected at 48' and 49' bgs off-Site radiological sample collected at 49' bgs 	
51						
52						
53						
54						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL08

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 33' bgs and backfilled to 36' bgs	
34					BACKFILL	
35						
36						
37	SW		0.0	-	Light brown, fine to coarse SAND , some fine to coarse gravel, moist	
38	SW		0.0	-		
39	SW		0.0	-		
40	SP		0.0	-	Tan, fine to medium SAND , trace fine to coarse gravel, moist	
41	SW		0.0	-	Tan, fine to coarse SAND , some fine to coarse gravel, moist	
42	SW		0.0	-	Trace fine to coarse gravel	
43	SW		0.0	-		
44	SW		0.0	-		
45	SP		0.0	-	Tan to light tan, fine to medium SAND , trace fine to coarse gravel, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O22 - DL08

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
46	SP		0.0	-	Tan to light tan, fine to medium SAND , trace fine to coarse gravel, moist	
47			0.0	-	Some brown to light brown, silty clay seams	
48			0.0	-	Light tan, gravel grades out	
49			0.0	-	Grading to light brown to brown, fine sandy, silt	
49	ML		1.3	-	Light brown to brown, fine sandy, SILT , trace clay and fine gravel, moist	
50	EOB					
51					NOTES:	
52					1. Boring completed to a depth of 49.5 feet bgs on 2/2/04	
53					2. Groundwater not encountered	
54					3. Boring backfilled with clean sand	
55					4. Analytical samples:	
56					a. on-Site radiological samples at every foot from	
57					36-49' bgs	
58					b. on-Site VOC samples collected at every foot from	
					45-49' bgs	
					c. off-Site VOC sample collected at 49' bgs	
					d. off-Site nickel sample collected at 49' bgs	
					e. off-Site radiological sample collected at 49' bgs	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL01

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.0	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23			0.3	-		
24	SP		0.5	-		
25			0.1	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL02

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
18					Open Excavation Soil previously excavated to 18' bgs	
19	SP		0.0	-	Light brown, fine to medium SAND , some well rounded gravel, trace silt, moist	
20			0.0	-	Medium to coarse sand, fine sand grades out	
21			0.0	-		
22			0.0	-		
23			0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL03

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.3	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23			0.0	-		
24	SP		0.0	-		
25			0.3	-		
26			0.5	-		
27	EOB		1.0	-		
28					NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL04

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.4	-	BACKFILL	
21			0.2	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23			0.3	-		
24	SP		0.3	-		
25			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL05

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpr/m)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.0	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23			0.2	-		
24	SP		0.5	-		
25			0.2	-		
26			0.4	-		
27	EOB		0.2	-		
28					NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL06 (1)

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.1	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.2	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.2	-		
23			0.0	-		
24	SP		0.2	-		
25			0.0	-		
26			0.2	-		
26			0.8	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL06 (2)

Date Drilled: 3/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 20' bgs and backfilled to 16' bgs	
12								
13								
14							BACKFILL	
15								
16								
17								
18							Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
19								
20								
21	SW		20	21	0.0	2.8		
22								
23	SP		21	24	0.0	3.4	Tan, fine to medium SAND , some fine to coarse gravel, trace coarse sand, occasional cobbles, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL06 (2)

Date Drilled: 3/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
24	SW						Tan, fine to coarse gravelly, fine to coarse SAND , medium dense, moist	
25	SP		20	24	0.0	3.2	Tan, fine to medium SAND , some fine to coarse gravel, medium dense, moist	
26	SW						Tan, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	
27			20	22	0.0	2.8	Tan, fine to medium SAND , some fine to coarse gravel, trace coarse sand and cobbles, medium dense, moist	
28								
29			17	20	0.0	2.9		
30								
31	SP		16	24	0.0	3.0		
32								
33			28	24	0.0	3.2		
34								
35			25	24	0.0	3.1		
36	SW						Tan to light brown, fine to coarse gravelly, fine to coarse SAND , trace cobbles, medium dense, moist	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL06 (2)

Date Drilled: 3/15/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SP		20	24	0.0	3.9	Tan, fine to medium SAND , trace fine gravel, medium dense, moist	
38	SW						Dark brown to black (discolored) to 37.3', fine to coarse gravelly, fine to coarse SAND , medium dense, moist Tan from 37.3'	
39			28	24	0.6	2.6	Light to dark brown, trace fine gravel Tan	
40	SP						Tan, fine SAND , some medium sand, trace fine gravel, medium dense, moist	
40	EOB						NOTES: 1. Boring completed to a depth of 40' bgs on 3/15/04 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 3/17/04 4. Analytical samples: a. on-Site radiological samples at every foot from 22-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs 5. Boring initially called O19-DL06, subcell was corrected to P19	
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P20 - DL15

Date Drilled: 3/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
11							Open Excavation Soil previously excavated to 18' bgs and backfilled to 14' bgs	
12								
13								
14							BACKFILL	
15								
16								
17							Tan, fine to coarse SAND with gravel, medium dense, dry	
18								
19	SW		26	12	0.0	3.2		
20							Tan, fine to medium SAND , some coarse sand, medium dense, dry	
21			29	24	0.0	2.9		
22	SP							
23			26	23	0.0	3.0		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P20 - DL15

Date Drilled: 3/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
24	SP						Tan, fine to medium SAND, some coarse sand, medium dense, dry	
25	SW		19	22	0.0	3.0	Tan, fine to coarse SAND with gravel, trace cobbles, medium dense, dry	
26								
27	SP		22	23	0.0	3.2	Tan, fine to medium SAND, some coarse sand, medium dense, dry	
28								
29	SW		28	24	0.0	3.0	Some fine to coarse gravel, trace cobbles Trace fine gravel, coarse gravel grades out	
30								
31	SW		42	24	0.0	3.1	Tan, fine to coarse SAND with gravel, dense, dry	
32	SP						Tan, fine to medium SAND, trace fine gravel and cobbles, dense, dry	
33	SW		34	24	0.0	3.0	Tan, fine to coarse SAND, some fine to coarse gravel, dense, dry	
34								
35	SW		32	22	0.0	2.8	Trace dark brown from 35.8-36'	
36								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P20 - DL15

Date Drilled: 3/18/04

Sampler Type: 3-inch split spoon driven by 300-lb hammer

Logged By: Adam Kneeling



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	Blows/Foot (center ft. only)	Recovery (in per 2-ft interval)	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
37	SP		31	20	0.0	2.8	Brown grading to tan by 37', fine to medium SAND, trace gravel, medium dense, moist Dark brown to black, fine to coarse layer from 36.8-37'	
38			33	22	0.0	3.1		
39	EOB						NOTES: 1. Boring completed to 40' bgs on 3/18/04 2. Groundwater not encountered 3. Boring backfilled with clean soil on 3/19/04 4. Analytical samples: a. on-Site radiological samples at every foot from 20-40' bgs b. on-Site and off-Site VOC sample collected at 40' bgs c. off-Site nickel sample collected at 40' bgs d. off-Site radiological sample collected at 40' bgs	
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL01

Date Drilled: 1/28/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
					Open Excavation Soil previously excavated to 35' bgs	
35			0.0	-	Brown to yellow, silty, fine to coarse SAND , some gravel and cobbles, moist	
36			0.0	-	Red-brown, cobbles grade out	
37			0.0	-	Brownish yellow	
38			0.0	-	Orange-red	
39			0.0	-	Light brown to tan	
40	SM		0.0	-		
41			0.0	-		
42			0.0	-	Light brown to yellow-brown, coarse sand grades out	
43			0.0	-		
44			0.0	-		
45	ML		0.0	-	Brown, clayey SILT , some fine to medium sand, moist	
46	SM		0.0	-	Light tan, silty, fine to medium SAND , some gravel, moist	
47						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL01

Date Drilled: 1/28/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell, Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
48	ML		0.0	-	Brown, clayey SILT , some fine to medium sand, moist	
49			0.0	-	Brown to light brown	
49	SM		0.0	-	Light brown to tan, silty, clayey, fine to medium SAND , moist	
50	EOB					
51					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 49.5' bgs on 1/28/04 Groundwater not encountered Boring backfilled with clean sand Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 35-49' bgs on-Site VOC samples collected every foot from 44-49' bgs off-Site VOC sample collected at 49' bgs off-Site nickel sample collected at 49' bgs off-Site radiological sample collected at 49' bgs 	
52						
53						
54						
55						
56						
57						
58						
59						
60						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL02

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 33' bgs	
34	SW		0.0	-	Brown, fine to coarse SAND , some fine to coarse gravel, moist Brown to orange-brown	
35			0.0	-	Orange-brown, fine to medium SAND , trace coarse sand, moist	
36			0.0	-	Orange-brown	
37			0.0	-		
38			0.0	-	Tan, trace fine gravel, coarse gravel grades out	
39	SP		0.0	-	Trace coarse gravel	
40			0.0	-		
41			0.0	-		
42			0.0	-		
43			0.0	-	Light tan to tan	
44			0.0	-		
45			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL02

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kopm)	Description	Remarks
46	ML				Light brown to brown, clayey SILT	
	SP		0.0	-	Light tan, fine to medium SAND , trace coarse sand and fine gravel	
47	ML				Light brown, sandy SILT , moist	
	CL		0.0	-	Light brown to brown, clayey silt to silty clay, trace fine to medium sand	
48	SM		0.0	-	Light gray-brown, silty, fine SAND , trace fine gravel, moist	
49	CL		0.0	-	Light brown, silty CLAY , moist	
50	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 49.5' bgs on 1/29/04 Groundwater not encountered Boring backfilled with clean sand Analytical samples: <ol style="list-style-type: none"> on-Site radiological samples at every foot from 34-49' bgs on-Site and off-Site VOC samples collected at 49' bgs off-Site radiological sample collected at 49' bgs 	
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL03

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
33					Open excavation Open excavation to 33' bgs	
34	SW		0.0	-	Brown to light brown, fine to coarse SAND, some fine to coarse gravel, trace cobbles, moist	
35					Light brown to orange-brown, cobbles grade out	
36					Orange-brown	
37						
38						
39	SP		0.0	-	Light brown to tan, fine to medium SAND, trace fine gravel, moist	
40						
41					Tan to light tan	
42						
43						
44					Light tan, trace coarse sand and gravel	
45						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL03

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
46	CL	[Dotted pattern]	0.0	-	Light tan, fine to medium SAND , some silty clay seams, trace coarse sand and fine gravel, moist	
47	SP		0.0	-		
48	CL		0.0	-		
49	CL	[Diagonal hatching]	0.0	-	Light brown to brown, silty CLAY to clayey silt, moist	
49			0.0	-		
50	EOB				NOTES: 1. Boring completed to a depth of 49.5' bgs on 1/29/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 34-49' bgs b. on-Site and off-Site VOC samples collected at 49' bgs c. off-Site radiological sample collected at 49' bgs	
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL04

Date Drilled: 1/30/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 33' bgs	
34					Brown to light brown, fine to coarse SAND , some fine to coarse gravel, moist	
35	SW		0.0	-		
36	SW		0.0	-		
37	SW		0.0	-	Brown to dark brown	
38	SW		0.0	-	Orange-brown to light brown, trace fine gravel	
39	SW		0.0	-	Grading to tan, fine to medium sand	
39	SP		0.0	-	Tan, fine to medium SAND , trace fine gravel, moist	
40	GW		0.0	-	Orange-brown, fine to coarse SAND and GRAVEL	
41	SP		0.0	-	Tan, fine to medium SAND , trace fine gravel, moist	
42	SP		0.0	-		
43	SP		0.0	-	Tan to light tan, trace coarse sand and fine to coarse gravel	
44	SP		0.0	-	Light tan, coarse sand and coarse gravel grade out	
45	SP		0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL04

Date Drilled: 1/30/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
46	SP		0.0	-	Light tan, fine to medium SAND, trace fine gravel, moist	
			0.0	-	Tan to light tan, clayey silt layer at 46.5'	
47	EOB				NOTES: 1. Boring completed to refusal at a depth of 46.5' bgs on 1/30/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 34-46' bgs b. on-Site and off-Site VOC samples collected at 46' bgs c. off-Site nickel sample collected at 46' bgs d. off-Site radiological sample collected at 46' bgs	
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL05

Date Drilled: 1/30/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
33					Open excavation Soil previously excavated to 33' bgs	
34					Brown to light brown, fine to coarse SAND , some fine to coarse gravel, trace cobbles, moist	
35			0.0	-	Cobbles grade out	
36	SW		0.0	-		
37			0.0	-	Light brown to orange-brown	
38			0.0	-		
39			0.0	-		
40			0.0	-	Grading to tan to light brown, fine to medium sand	
41			0.0	-	Tan, fine to medium SAND , little fine to coarse gravel, moist	
42			0.0	-	Tan to light tan, trace fine to coarse gravel and coarse sand	
43	SP		0.0	-		
44			0.0	-	Light tan, coarse sand and coarse gravel grade out	
45			0.0	-		

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P21 - DL05

Date Drilled: 1/30/04

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
46	SP		0.0	-	Light tan, fine to medium SAND, trace fine gravel, moist	
46	ML		0.0	-	Light brown to brown, clayey SILT, moist	
47	SP		0.0	-	Tan, fine to medium SAND, trace fine gravel, moist	
48	CL		0.0	-	Light brown, silty CLAY interbedded with tan, fine to medium sand, trace fine gravel, moist	
49	EOB					
50					NOTES: 1. Boring completed to refusal at a depth of 48.4' bgs on 1/30/04 2. Groundwater not encountered 3. Boring backfilled with clean sand 4. Analytical samples: a. on-Site radiological samples at every foot from 34-48' bgs b. on-Site VOC samples collected at every foot from 45-48' bgs c. off-Site VOC sample collected at 48' bgs d. off-Site nickel sample collected at 48' bgs e. off-Site radiological sample collected at 48' bgs	
51						
52						
53						
54						
55						
56						
57						
58						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P22 - DL01

Date Drilled: 1/20/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
25					Open Excavation Soil previously excavated 28' bgs	
26						
27					Light brown, gravelly, fine to medium SAND	
28			0.0	-		
29			0.0	-		
30			0.0	-		
31	SP		0.0	-		
32			0.0	-		
33			0.0	-	Rust-colored	
34	EOB				NOTES: 1. Boring completed to 33.5' bgs on 1/20/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 28-33' bgs b. on-Site VOC sample collected at 33' bgs c. off-Site radiological sample collected at 33'bgs	
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P22 - DL02

Date Drilled: 1/21/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
25					Open Excavation Soil previously excavated 28' bgs	
26						
27					Light brown, fine to medium SAND , some well rounded gravel, trace silt, moist	
28			0.0	-		
29			0.0	-		
30			0.0	-		
31	SP		0.0	-		
32			0.0	-		
33			0.0	-		
34	EOB				NOTES: 1. Boring completed to 33.5' bgs on 1/21/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 28-33' bgs b. off-Site radiological sample collected at 33' bgs	
35						
36						
37						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL01

Date Drilled: 2/5/04

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 19' bgs	
20	SP		0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Medium to coarse sand, fine sand grades out	
22			0.0	-		
23			0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/5/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL02

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.0	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL03

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Larry Landry



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20		X	0.0	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21		.	0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22		.	0.0	-		
23		.	0.0	-		
24	SP	.	0.0	-		
25		.	0.0	-		
26		.	0.0	-		
27					NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 11 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL04

Date Drilled: 2/6/04

Sampler Type: Stainless steel hand auger

Logged By: Carrie Olsen



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
19					Open Excavation Soil previously excavated to 20' bgs and backfilled to 19' bgs	
20			0.0	-	BACKFILL Light tan, fine to medium sand, some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse SAND , some well rounded gravel, trace silt, moist	
22			0.0	-		
23			0.0	-		
24	SP		0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to 26.5' bgs on 2/6/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. on-Site radiological samples at every foot from 19-26' bgs b. on-Site and off-Site VOC sample collected at 26' bgs c. off-Site nickel sample collected at 26' bgs d. off-Site radiological sample collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O17

Date Drilled: 11/7/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
15	SP		7.0	8.7	Open excavation Soil previously excavated to 15' Brown, coarse SAND , some medium sand and gravel, moist	*No lithological information (not continuously logged)
16					*No samples collected	
17						
18						
19	SP		7.5	8.0	Brown, medium to coarse SAND , some gravel, trace cobbles, moist	
20					*No samples collected	
21						
22						
23						
24	SP		10.5	8.0	Brown, medium to coarse SAND , some gravel, moist	
25			20.0	8.0		
26	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 11/7/03 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 11/07/03 4. SP samples collected at 25' bgs, analyzed on Site for radioactivity, on and off Site for VOCs and off Site for nickel.	
27						
28						
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O18

Date Drilled: 11/7/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 12' bgs	
7						
8						
9						
10						
11					BACKFILL Gray, medium to coarse sand, some gravel, moist	*No lithological information (not continuously logged)
12			1.0	8.0		
13					*No samples collected	
14						
15						
16						
17						
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O18

Date Drilled: 11/7/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
19	SP		6.0	9.0	Brown, medium to coarse SAND , some gravel, moist	*No lithological information (not continuously logged)
20					*No samples collected	
21	SP		9.0	10.0	Brown, medium to coarse SAND , some gravel, moist	
22					*No samples collected	
23						
24						
25	SP		11.0	10.0	Brown, medium to coarse SAND , some gravel, moist	
26	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 11/7/03 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil on 11/07/03 4. SP samples collected at 25' bgs, analyzed on Site for radioactivity, on and off Site for VOCs and off Site for nickel.	
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O18 - DL01

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kepm)	Description	Remarks
21					Open excavation Soil previously excavated to 24' bgs	
22						
23						
24					Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
25	SP		0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/2/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 24-26' b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 24' and 26' bgs	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL01

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
23					Open excavation Soil previously excavated to 23'	
23	SP		0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
24			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
25			0.0	-		
26			0.0	-		
27			0.0	-		
28			0.0	-		
29			0.0	-		
30			0.0	-		
31	EOB					
32					NOTES: 1. Boring completed to a depth of 30.5' bgs on 1/29/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 25-30'; b. On-Site and off-Site VOCs at 30' c. Off-Site nickel at 30' d. Off-Site radiological at 30' 5. Boring named O19-DL01, but located in subcell O18	
33						
34						
35						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL02

Date Drilled: 1/29/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
23					Open excavation Soil previously excavated to 23' bgs	
24			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
25			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
26			0.0	-		
27	SP		0.0	-		
28			0.0	-		
29			0.0	-		
30			0.0	-		
31	EOB					
32					NOTES: 1. Boring completed to a depth of 30.5' bgs on 1/29/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 23-30' b. On-Site and off-Site VOCs at 30' c. Off-Site nickel at 30'	
33						
34						
35						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL03

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
24					Open excavation Soil previously excavated to 24' bgs		
25	SP		0.0		Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist		
26			0.0		Light brown, medium to coarse sand, fine sand grades out		
27			0.0				
27			0.0				
28	EOB						
29					NOTES: 1. Boring completed to a depth of 27.5' bgs on 2/2/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 25-27' b. On-Site and off-Site VOCs at 27' c. Off-Site nickel at 27' d. Off-Site radiological at 27'		
30							
31							
32							
33							
34							
35							
36							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL04

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 24' bgs	
22						
23						
24					Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
25	SP		0.0	-		
26			0.0	-		Light brown, medium to coarse sand, fine sand grades out
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/2/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 24-26' b. On-Site and off-Site VOCs at 26' c. Off-Site nickel at 26' d. Off-Site radiological at 26'	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL05

Date Drilled: 2/2/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kepm)	Description	Remarks
21					Open excavation Soil previously excavated to 24' bgs	
22						
23						
24					Light tan, fine to medium SAND , some gravel, trace silt, moist	
25	SP		0.0	-	Light brown, medium to coarse sand, fine sand grades out	
26			0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/2/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 24-26' b. On-Site and off-Site VOCs at 26' c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL06

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
21					Open excavation Soil previously excavated to 24' bgs	
22						
23						
24					Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
25	SP		0.0	-	Light brown, medium to coarse sand, fine sand grades out	
26			0.4	-		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 24-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: O19 - DL07

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 23' bgs	
22						
23			0.5	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
24			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
25	SP		0.0	-		
26			0.0	-		
26.5						
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring <i>backfilled with clean soil</i> 4. Analytical samples: a. On-Site radiological every foot from 23-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL01

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 24' bgs	
22						
23						
24						
25	SP		0.0	-	Light tan fine to medium SAND , some well rounded gravel, trace silt, moist	
26			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
27	EOB		0.0	-		
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 24-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL02

Date Drilled: 2/3/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
21					Open excavation Soil previously excavated to 23' bgs	
22						
23					Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist Light brown, medium to coarse sand, fine sand grades out	
24			0.0	-		
25	SP		0.0	-		
26			0.0	-		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/3/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 23-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
28						
29						
30						
31						
32						
33						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL03

Date Drilled: 2/4/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/4/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: P19 - DL04

Date Drilled: 2/4/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/4/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL01

Date Drilled: 2/5/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/5/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs 5. Boring named Q19-DL01, but located in subcell P19	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL02

Date Drilled: 2/4/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20		SP	0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23			0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/4/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL03

Date Drilled: 2/5/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/5/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 12 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Q19 - DL04

Date Drilled: 2/5/04

Sampler Type: Stainless steel hand auger

Logged By: Kyle Strumfels



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nat 3x3 (kcpm)	Description	Remarks
19					Open excavation Soil previously excavated to 19' bgs	
20			0.0	-	Light tan, fine to medium SAND , some well rounded gravel, trace silt, moist	
21			0.0	-	Light brown, medium to coarse sand, fine sand grades out	
22			0.0	-		
23	SP		0.0	-		
24			0.0	-		
25			0.0	-		
26			0.0	-		
27	EOB					
28					NOTES: 1. Boring completed to a depth of 26.5' bgs on 2/5/04 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-Site radiological every foot from 19-26' bgs b. On-Site and off-Site VOCs at 26' bgs c. Off-Site nickel at 26' bgs d. Off-Site radiological at 26' bgs	
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X04

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
	ML				SILT	
1	SM		0.0	32.0	Dark brown, silty SAND , little gravel	
2	ML		0.0	39.0	Light brown to orange-brown, sandy SILT , little gravel, with roots	
3						
4	SM		0.0	13.2	Light brown to orange-brown, silty SAND , some gravel	
4	EOB					
5					NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 2', and 3.5'	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X04N

Date Drilled: 11/18/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
4		SP	0.0	9.2	Brown, medium to coarse SAND , some gravel, moist	Soil previously excavated to 3' bgs bkg = Background
5						
6						
7						
8	SP		0.0	<bkg		
9						
10						
11						
12						
13						
14			0.0	< bkg		
15	EOB				NOTES: 1. Boring completed to a depth of 14 5' bgs on 11/18/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 14' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
16						
17						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X04S

Date Drilled: 11/18/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
4			0.0	<bkg	Brown, medium to coarse SAND , some gravel, moist	Soil previously excavated to 3' bgs bkg = Background
5						
6			1.7	<bkg		
7			2.1	<bkg		
8	SP		0.0	2.2		
9			0.0	<bkg		
10						
11			0.0	<bkg		
12						
13		0.0	< bkg			
14	EOB				NOTES: 1. Boring completed to a depth of 13.5' bgs on 11/18/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. On-site Sample collected at 8' bgs, analyzed on Site for VOCs and radioactivity 5. SP sample collected at 13' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
15						
16						
17						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X05

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1	ML		0.0	13.3	SILT Dark brown, sandy silt, some gravel, with roots	
2	SM		0.0	12.6	Light brown, silty SAND , some gravel	
3	SW		0.2	12.5	Light brown, fine to coarse SAND , some gravel	
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 1', 2', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X05N

Date Drilled: 11/18/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1 2 3 4					Open Excavation Soil previously excavated to 4' bgs	
5 6 7 8			0.0 < bkg		Brown, medium to coarse SAND , some gravel, moist	bkg = Background
9 10 11 12 13	SP		0.0 < bkg			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X05N

Date Drilled: 11/18/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14	SP				Brown, medium to coarse SAND, some gravel, moist	
15			0.0	0.8		
16						
17	EOB				NOTES: 1. Boring completed to a depth of 16.5' bgs on 11/19/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 16' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
18						
19						
20						
21						
22						
23						
24						
25						
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X05S

Date Drilled: 11/19/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1 2 3 4					Open excavation Soil previously excavated to 4' bgs	
5 6 7 8 9 10 11 12 13	SP		0.0 < bkg	0.0 < bkg	Brown, medium to coarse SAND , some gravel, moist	bkg = Background

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X05S

Date Drilled: 11/19/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
14	SP				Brown, medium to coarse SAND, some gravel, moist	
15			0.0	0.4		
16						
17	EOB				NOTES: 1 Boring completed to a depth of 16.5' bgs on 11/20/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 16' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
18						
19						
20						
21						
22						
23						
24						
25						
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X06N

Date Drilled: 11/20/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpcm)	Description	Remarks
4					Open excavation Soil previously excavated to 4' bgs	bkg = Background
5			0.0	< bkg	Brown, medium to coarse SAND , some gravel, moist	
6						
7						
8						
9						
10	SP			0.0	< bkg	
11						
12						
13						
14				0.0	0.2	
15						
16						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X06N

Date Drilled: 11/20/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
17	SP		0.0 < bkg		Brown, medium to coarse SAND, some gravel, moist	bkg = Background
18						
19						
20						
21						
22	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 11/20/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 25' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
23						
24						
25						
26						
27						
28						
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X06S

Date Drilled: 11/20/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
4					Open excavation Soil previously excavated to 5' bgs	
5					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
6			0.0	< bkg		
7	SP					
8						
9						
10			0.0	< bkg		
11						
12						
13						
14	SP					
15			0.0	< bkg		
16						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X06S

Date Drilled: 11/20/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
17					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
18						
19						
20	SP		0.0 < bkg			
21						
22						
23						
24						
25			0.0 < bkg			
26	EOB				NOTES: 1. Boring completed to a depth of 25 5' bgs on 11/21/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 25' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
27						
28						
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X07

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	15.9	Dark brown, silty SAND, little gravel, with roots	
2					Light brown, some gravel	
3	SW		0.0	16.1		
4					Dark brown to orange, fine to coarse SAND, some gravel	
4	EOB		0.0	13.8		
5					NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 2.0', and 3.5'	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X07N

Date Drilled: 11/21/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
4					Open excavation Soil previously excavated to 5' bgs	
5						bkg = Background
6			0.0	< bkg	Brown, medium to coarse SAND , some gravel, moist	
7						
8						
9			0.0	< bkg		
10	SP					
11						
12						
13						
14						
15			0.0	< bkg		
16						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X07N

Date Drilled: 11/21/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
17	SP				Brown, medium to coarse SAND, some gravel, moist	bkg = Background
18						
19			0.0	< bkg		
20						
21						
22						
23						
24			0.0	< bkg		
25						
26	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 11/21/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 25' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
27						
28						
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X07S

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
5					Open excavation Soil previously excavated to 6' bgs	
6			0.0	< bkg	Brown, medium to coarse SAND , some gravel, moist	bkg = Background
7						
8						
9						
10			0.0	< bkg		
11	SP					
12						
13						
14						
15			0.0	< bkg		
16						
17						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X07S

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
18	SP				Brown, medium to coarse SAND, some gravel, moist	bkg = Background
19						
20			0.0	< bkg		
21						
22						
23						
24						
25			0.0	< bkg		
26						
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 11/22/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 26' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
28						
29						
30						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X08N

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1					Open excavation Soil previously excavated to 7' bgs	
2						
3						
4						
5						
6						
7						
8	SP		0.0 < bkg		Brown, medium to coarse SAND , some gravel, moist	bkg = Background
9						
10			0.0 < bkg			
11						
12			0.0 < bkg			
13			0.0 < bkg			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X08N

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks	
14	SP		0.0	< bkg	Brown, medium to coarse SAND , some gravel, moist	bkg = Background	
15							
16							
17							
18							
19							
20			0.0	< bkg			
21	EOB				NOTES: 1. Boring completed to a depth of 20.5' bgs on 11/22/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 20' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel		
22							
23							
24							
25							
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X08S

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1					Open excavation Soil previously excavated to 7' bgs	
2						
3						
4						
5						
6						
7						
8	SP		0.0	< bkg	Brown, medium to coarse SAND, some gravel, moist	bkg = Background
9						
10			0.0	< bkg		
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X08S

Date Drilled: 11/22/03

Sampler Type: Stainless steel hand auger

Logged By: Elliot Pitney



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks	
14	SP		0.0 < bkg		Brown, medium to coarse SAND , some gravel, moist	bkg = Background	
15							
16							
17							
18							
19							
20			0.0 < bkg				
21	EOB				NOTES: 1. Boring completed to a depth of 20.5' bgs on 11/22/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 20' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel		
22							
23							
24							
25							
26							

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X09N

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
9			8.0 < bkg			
10					Some cobbles	
11						
12						
13						
14	SP					
15			0.3 < bkg			
16						
17						
18			0.0 < bkg			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X09N

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19	SP				Brown, medium to coarse SAND, some gravel, moist	bkg = Background
20			0.0	< bkg		
21	EOB				NOTES: 1. Boring completed to a depth of 20.5' bgs on 11/24/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 20' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X09S

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
7					Open excavation Soil previously excavated to 9' bgs	
8						
9					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
10			0.0	< bkg		
11						
12						
13						
14	SP					
15			0.0	< bkg		
16						
17						
18			0.0	< bkg		
19						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X09S

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
20	SP		0.0	< bkg	Brown, medium to coarse SAND, some gravel, moist	bkg = Background
21	EOB				NOTES: 1. Boring completed to a depth of 20.5' bgs on 11/24/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 20' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X10

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	17.8	Dark brown, silty SAND , some gravel, with roots Light brown	
2	SW		0.0	15.8	Brown to orange, fine to coarse SAND , some gravel	
3					Light brown to tan, little gravel	
4	EOB		0.0	14.5		
5					NOTES: 1. Boring completed to a depth of 4' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 1.5', and 3.5'	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X10N

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 10' bgs	
7						
8					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
9						
10			0.0 < bkg			
11	SP					
12						
13						
14						
15			0.0 < bkg			
16						
17						
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X10N

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19	SP				Brown, medium to coarse SAND, some gravel, moist	bkg = Background
20			0.0	< bkg		
21						
22						
23						
24						
25						
26			0.0	< bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 11/24/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 26' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X10S

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, medium to coarse SAND, some gravel and cobbles, moist	bkg = Background
9						
10	SP		0.0 < bkg			
11						
12						
13			0.0 < bkg			
14						
15						
16			0.0 < bkg			
17						
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X10S

Date Drilled: 11/24/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19					Brown, medium to coarse SAND , some gravel and cobbles, moist	bkg = Background
20						
21			0.0 < bkg			
22	SP					
23						
24						
25						
26			0.0 < bkg			
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 11/25/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 26' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X11N (1)

Date Drilled: 11/25/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
7					Open excavation Soil previously excavated to 8' bgs	
8	SP		450	< bkg	Brown, medium to coarse SAND , some gravel, moist	
9					<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 9' bgs on 11/25/03 Groundwater not encountered Boring backfilled with clean soil Field samples collected at 9' bgs 	<p>bkg = Background</p> <p>Terminated boring due to elevated PID readings. See new boring X11N (2) drilled in same location on 12/02/03.</p>
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X11N (2)

Date Drilled: 12/2/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
7					Open Excavation Soil previously excavated to 9' bgs	
8						
9					Brown, medium to coarse SAND , some gravel, moist	bkg = Background
10			75	< bkg		
11			20			
12			10			
13			0.3	< bkg		
14	SP		0.0			
15			0.0	< bkg		
16			0.0			
17			0.0			
18			0.0			
19			0.0		Medium sand grades out	

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X11N (2)

Date Drilled: 12/2/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
20	SP		0.0	< bkg	Brown, coarse SAND, some gravel, moist	bkg = Background
21			0.0			
22			0.0			
23			0.0			
24			0.0			
24			0.0	< bkg		
25	EOB				NOTES: 1. Boring completed to a depth of 24.5' bgs on 12/1/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-site sample collected at 9' bgs b. Field samples collected at 16' and 21' bgs c. SP sample collected at 24' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
26						
27						
28						
29						
30						
31						
32						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X11S

Date Drilled: 12/02/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kc ppm)	Description	Remarks
6					Open Excavation Soil previously excavated to 9' bgs	
7						
8						
9						bkg = Background
9			290	< bkg	Red-brown, fine to coarse SAND , with gravel, moist	
10			0.0	<bkg		
11			0.0			
12			0.0			
13			0.0			
14	SW		0.0			
14			<1.0	4.5	Brown, some gravel and cobbles	
15			0.0			
16			0.0			
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X11S

Date Drilled: 12/02/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND , some gravel and cobbles, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0			
23			0.0			
24			0.0			
24			0.0	<bkg		
25	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 24.5' bgs on 12/2/03 Groundwater not encountered Boring backfilled with clean soil Analytical samples: <ol style="list-style-type: none"> Field samples collected at 14', and 19' bgs SP sample collected at 24' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel 	
26						
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X12N

Date Drilled: 12/1/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
9					Open Excavation Soil previously excavated to 9' bgs	
9-10			900 < bkg		Brown to red-brown, fine to coarse SAND with gravel, some cobbles, moist	bkg = Background
10-11			260 < bkg			
11-12			135 < bkg			
12-13						
13-14						
14-16	SW					
16-17			0.0 < bkg			
17-18						
18-19						
19-20						
20-21						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X12N

Date Drilled: 12/1/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
22	SW		0.0	< bkg	Brown to red-brown, fine to coarse SAND with gravel, some cobbles, moist	bkg = Background
23						
24						
25						
26			0.0	< bkg		
27	EOB				<p>NOTES:</p> <ol style="list-style-type: none"> Boring completed to a depth of 26.5' bgs on 12/1/03 Groundwater not encountered Boring backfilled with clean soil Analytical samples: <ol style="list-style-type: none"> On-site sample collected at 9' bgs Field samples collected at 16' and 21' bgs SP sample collected at 26' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel 	
28						
29						
30						
31						
32						
33						
34						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X12S

Date Drilled: 12/1/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
9					Open Excavation Soil previously excavated to 9' bgs	bkg = Background
10			0.0 < bkg		Brown, medium to coarse SAND with gravel, moist	
11			75 < bkg			
12			208 < bkg			
13						
14	SP					
15						
16						Some cobbles
17			0.0 < bkg			
18						
19						
20						
21						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X12S

Date Drilled: 12/1/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
22	SP		0.0	< bkg	Brown, medium to coarse SAND, with gravel, some cobbles, moist	bkg = Background
23						
24						
25						
26			0.0	< bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/1/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. On-site samples collected at 9' and 11' bgs b. Field samples collected at 16' and 21' bgs c. SP sample collected at 26' bgs, analyzed on Site for radioactivity and VOCs and off Site for radioactivity, VOCs, and nickel	
28						
29						
30						
31						
32						
33						
34						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X13N

Date Drilled: 11/25/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 8' bgs	
7						
8					Brown, medium to coarse SAND with gravel, moist	bkg = Background
9	SW		15	<bkg		
10						
11						
12						
13						
14						
15						
16						
16			0.0	< bkg		
17						
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X13N

Date Drilled: 11/25/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19	SW				Brown, medium to coarse SAND with gravel, moist	bkg = Background
20						
21			0.0	<bkg		
22						
23						
24						
25			0.0	<bkg		
26						
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 11/25/03 2. Groundwater not encountered 3. Boring backfilled to grade with clean soil 4. Radiological field samples collected at 16' and 21' bgs; on and off Site SP samples for radioactivity and VOCs and off Site for nickel collected at 26' bgs	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X13S

Date Drilled: 12/02/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 8' bgs	
7						
8					Brown, fine to coarse SAND with gravel and cobbles, moist	bkg = Background
9			5.0	<bkg		
10			0.0	< bkg		
11			0.0			
12			0.0			
13	SW		0.0	< bkg		
14			0.0			
15			0.0			
16			0.0	<bkg		
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X13S

Date Drilled: 12/02/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19	SW		0.0	< bkg	Brown, fine to coarse SAND with gravel and cobbles, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0	<bkg		
26.5			EOB			
27					NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/3/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP sample collected at 26' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X14N

Date Drilled: 12/03/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open Excavated Soil previously excavated to 7' bgs	bkg = Background
7					Brown, fine to coarse SAND , some gravel, moist	
8			14.0	<bkg		
9			2.0	<bkg		
10			0.0	< bkg		
11			0.0			
12			0.0			
13	SW		0.0	< bkg		
14			0.0			
15			0.0			
16			0.0	<bkg		
17			0.0			
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X14N

Date Drilled: 12/03/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19	SW		0.0	< bkg	Brown, fine to coarse SAND , some gravel, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0			
26			0.0	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/3/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. Field samples collected at 16' and 21' bgs b. SP samples collected at 26' bgs, analyzed on and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X14S

Date Drilled: 12/04/03

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines, Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, fine to coarse SAND with gravel, moist	bkg = Background
9			20.1	< bkg		
10			10.8	<bkg		
11			0.8	<bkg		
12			0.0			
13			0.0			
14	SW		0.0			
15			0.0			
16			0.0	<bkg		
17			0.0			
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X14S

Date Drilled: 12/04/03

Sampler Type: Stainless steel hand auger

Logged By: Govi Hines, Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0			
26			0.0	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/4/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 26' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X15N

Date Drilled: 12/04/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, medium to coarse SAND with gravel, occasional cobbles, moist	bkg = Background
9			5.0	< bkg		
10			12.0			
11			0.0			
12			20.0			
13			2.0			
14	SP		0.0	<bkg		
15			0.0			
16			0.2			
17			0.0			
18						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X15N

Date Drilled: 12/04/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
19	SP		0.0	< bkg	Brown, medium to coarse SAND with gravel, trace cobbles, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0			
23			0.0			
24	SW		0.0	<bkg	Brown, fine to coarse SAND with gravel, moist	
25			0.0			
26			0.0			
26			0.4	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/4/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 26' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X15S

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8						
9						
9			0.1	< bkg	Brown, fine to coarse SAND with gravel, moist	bkg = Background
10			0.0			
11			0.0			
12			0.0			
13			0.0			
14	SW		0.0			
15			0.0			
16			0.0			
17			0.5	4.2		
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X15S

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0			
21			0.0			
22			0.8	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0			
26			0.0	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/5/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 26' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X16N

Date Drilled: 12/03/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, fine to coarse SAND with gravel, moist, slight odor	bkg = Background
9			20.0	<bkg		
10			0.0	<bkg		
11			0.0			
12			0.0			
13			0.0			
14	SW		0.0			
15			0.0			
16			0.0	3.7		
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X16N

Date Drilled: 12/03/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19	SW		0.0	< bkg	Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0			
21			0.0	<bkg		
22			0.0			
23			0.0			
24			0.0			
25			0.0			
25			0.0	<bkg		
26	EOB				NOTES: 1. Boring completed to a depth of 25.5' bgs on 12/5/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 25' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X16S

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 8' bgs	
7						
8					Brown, fine to coarse SAND with gravel, moist	bkg = Background
9			0.0	<bkg		
10			0.0			
11			0.0			
12			0.0			
13	SW		0.0			
14			0.0			
15			0.0			
16			0.0	<bkg		
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X16S

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Geil



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist, slight odor	bkg = Background
20			0.0			
21			0.0			
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0	<bkg		
26			0.0	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/5/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 26' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X17N

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8						
9						
10	SW		0.0	<bkg	Brown, fine to coarse SAND with gravel, moist	bkg = Background
11			0.0			
12			0.0			
13			0.0			
14			0.0			
15			0.0	<bkg		
16			0.0			
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X17N

Date Drilled: 12/05/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
26			0.0	<bkg		
27	EOB				NOTES: 1. Boring completed to a depth of 26.5' bgs on 12/6/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 26' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X17S

Date Drilled: 12/06/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 9' bgs	
7						
8					Brown, fine to coarse SAND with gravel, moist	bkg = Background
9						
10			1.5	<bkg		
11			3.0	<bkg		
12			0.0			
13	SW		0.0			
14			0.0			
15			0.0			
16			0.0	<bkg		
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X17S

Date Drilled: 12/06/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0			
21			0.0	<bkg		
22			0.0	<bkg		
23			0.0			
24			0.0			
25			0.0			
25			0.0	2.3		
26	EOB				NOTES: 1. Boring completed to a depth of 26' bgs on 12/8/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 25' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X18N

Date Drilled: 12/08/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
6					Open excavation Soil previously excavated to 10' bgs	
7						
8					Brown, fine to coarse SAND with gravel, moist	bkg = Background
9						
10			25.0	<bkg		
11						
12			10.0			
13			0.0			
14	SW		0.0			
15			0.0	<bkg		
16			0.0			
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X18N

Date Drilled: 12/08/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
19	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
20			0.0	<bkg		
21			0.0			
22			0.0			
23			0.0			
24			0.0			
24			0.0	<bkg		
25	EOB				NOTES: 1. Boring completed to a depth of 24.5' bgs on 12/8/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 24' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
26						
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X18S

Date Drilled: 12/08/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
6					Open excavation Soil previously excavated to 10' bgs	
7						
8					Brown, fine to coarse SAND with gravel, some cobbles, moist	bkg = Background
9						
10						
11						
12						
13						
14	SW		0.0	<bkg		
15			0.0			
16			0.0			
17			0.0			
18			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X18S

Date Drilled: 12/08/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell, Rob Giordano



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
19	SW		0.0	<bkg	Brown, fine to coarse SAND with gravel, some cobbles, moist	bkg = Background
20			0.0			
21			0.0			
22			0.0			
23			0.0			
24			0.0	<bkg		
25	EOB				NOTES: 1. Boring completed to a depth of 24.5' bgs on 12/9/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 24' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
26						
27						
28						
29						
30						
31						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X19N

Date Drilled: 12/09/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
4					Open excavation Soil previously excavated to 5' bgs	bkg = Background
5						
6	SW		5.0	<bkg	Brown, fine to coarse SAND with gravel, moist	
7			0.0			
8			0.0			
9			0.0			
10			0.0			
11			0.0			
12			0.0			
13			0.0			
14			0.0	<bkg		
15			0.0			
16			0.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X19N

Date Drilled: 12/09/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
17	SW		0.0		Brown, fine to coarse SAND with gravel, moist	bkg = Background
18			0.0			
19			0.0	<bkg		
20			0.0			
21			0.0			
22			0.0			
23			0.0			
24			0.0	<bkg		
25	EOB				NOTES: 1. Boring completed to a depth of 24.5' bgs on 12/9/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 24' bgs, analyzed on Site and off Site for radioactivity and VOCs and off Site for nickel	
26						
27						
28						
29						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X19S

Date Drilled: 12/09/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1	SW	[Dotted pattern]			Brown, fine to coarse SAND with gravel, moist	bkg = Background
2			0.1	22		
3						
4						
5			5.0	<bkg		
6			2.0			
7			0.0			
8			0.0			
9			0.0			
10			0.0			
11			0.0			
12			5.0			
13			4.0			

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: X19S

Date Drilled: 12/09/03

Sampler Type: Stainless steel hand auger

Logged By: Mark Gell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
14			2.0	<bkg	Brown, fine to coarse SAND with gravel, moist	bkg = Background
15			0.0			
16			0.0			
17			0.0			
18			0.0			
19	SW		0.0	<bkg		
20			0.0			
21			0.0			
22			0.0			
23			0.0	<bkg		
24						
25	EOB				NOTES: 1. Boring completed to a depth of 24.5' bgs on 12/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. SP samples collected at 24' bgs, analyzed on Site and	
26						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y04

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Brian Stoudt



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1	ML		0.0	16.0	SILT Dark brown, sandy silt, little gravel, with roots	
2					Light brown, some gravel	
3	SM		0.0	10.8	Light brown to orange-brown, silty SAND , some gravel	
4	GW		0.0	11.8	Orange-brown, fine to coarse SAND and GRAVEL	
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 1', 2.5', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y05

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	15.1	Dark brown, silty SAND, some gravel Brown	
2	SW		0.0	13.7	Light brown to tan, fine to coarse SAND, some gravel	
3						
4			0.0	13.2		
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 1.5', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y07

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
	ML				SILT	
1	SM		0.0	19.8	Dark brown, silty SAND , little gravel, with roots Light brown, some gravel	
2			0.0	16.1		
3	SW				Light brown, fine to coarse SAND , some gravel	
4	EOB		0.0	14.1		
5					NOTES: 1. Boring completed to a depth of 4' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 1.5', and 3.5'	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y08

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	15.2	Dark brown, silty SAND , little gravel, with roots Light brown, some gravel	
2	SW		0.1	15.7	Light brown to orange, fine to coarse SAND , some gravel Light brown to orange to tan	
3						
4			0.2	14.9	Light brown to tan, little gravel	
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples: a. Field samples collected at 0.5', 1.5', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y09

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcprn)	Description	Remarks
	ML				SILT	
1	SM		0.4	13.7	Dark brown, silty SAND , little gravel, with roots Light brown, some gravel	
2	SW		0.0	14.0	Light brown, fine to coarse SAND , some gravel	
3					Light brown to tan	
4			0.0	15.2		
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Analytical samples. a. Field samples collected at 0.5', 1.5', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y10

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
	ML		0.0	17.7	SILT	
1	SM				Dark brown, silty SAND , little gravel, with roots Light brown, some gravel	
2	SW		0.0	17.3	Light brown to orange, SAND , little gravel	
3					Light brown to tan, some gravel	
4			0.0	16.8		
4	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0', 1.5', and 3.5'	
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y11

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1	ML		0.0	20.8	SILT Dark brown, sandy silt, with roots	
2						
3	SM		0.0	21.4	Light brown, silty SAND , some gravel	
4	SW		0.0	19.7	Light brown to tan, SAND , some gravel	
5	EOB				NOTES: 1. Boring completed to a depth of 4.5' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', 3' and 4'	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Y12

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kc ppm)	Description	Remarks
1	ML		0.0	15.9	Dark brown, sandy SILT , some gravel, with roots	
2	SM		0.0	16.9	Light brown, silty SAND , some gravel	
3					Light brown to tan	
4	SW		0.0	16.3	Light brown to tan, fine to coarse SAND , some gravel	
5	EOB				NOTES: 1. Boring completed to a depth of 4' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0', 2', and 3.5' bgs	
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z04

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1	ML		0.0	17.3	SILT Dark brown, sandy silt, little gravel, with roots Light brown, some gravel	
2	GW		0.0	15.6	Orange-brown, fine to coarse SAND and GRAVEL	
EOB					NOTES: 1. Boring completed to a depth of 2' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5' and 1.5'	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z05

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	-	Dark brown, silty SAND, some gravel, with roots	
2			0.0	16.0	Light brown	
2	EOB				NOTES: 1. Boring completed to a depth of 2' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5' and 1.5'	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z07

Date Drilled: 9/10/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0	16.9	Dark brown, silty SAND , gravel, with roots	
2			0.0	14.7	Light brown	
2	EOB				NOTES: 1. Boring completed to a depth of 2' bgs on 9/10/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5' and 1.5'	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z08

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML		1.1	15.6	SILT	
1	SM				Dark brown, silty SAND some gravel, with roots Light brown to orange	
2	EOB		0.0	16.3		
3					NOTES: 1. Boring completed to a depth of 2' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0', and 1.5'	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z09

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
	ML				SILT	
1	SM		0.0		Dark brown, silty SAND , some gravel, with roots	
2	EOB		0.0		Light brown to orange	
3					NOTES: 1. Boring completed to a depth of 2' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', and 1.5'	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z10

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Rob Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcprn)	Description	Remarks
	ML				SILT	
1	SM		2.0	14.3	Dark brown, silty SAND , little gravel, with roots Brown-orange, some cobbles	
2	SW		2.1	14.3	Light brown, fine to coarse SAND , some cobbles	
3					NOTES: 1. Boring completed to a depth of 2' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5' and 1.5'	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z11

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	Nal 3x3 (kcpm)	Description	Remarks
1	ML		0.0	18.8	SILT Dark brown, sandy silt, little gravel, with roots	
2	SM		0.0	18.0	Light brown, silty SAND , some gravel	
EOB					NOTES: 1. Boring completed to a depth of 2' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0.5', and 1.5'	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						

Project No.: NYSDEC: V-00089-1; URS: 27010-039

Project: Cell 14 Drilling Program

Client: GTEOSI, Hicksville, NY

Log of Boring: Z12

Date Drilled: 9/11/03

Sampler Type: Stainless steel hand auger

Logged By: Robert Connell



5 Penn Plaza
13th Floor
New York, NY 10001

Depth (feet)	USCS Letter Symbol	USCS Lithologic Symbol	PID Sample Screen (ppm)	NaI 3x3 (kcpm)	Description	Remarks
1	ML SM		0.0	17.4	SILT Dark brown, sandy SILT , little gravel, with roots Light brown, some gravel	
2	SW EOB		0.0	16.7	Light brown to tan, fine to coarse SAND , some gravel	
3					NOTES: 1. Boring completed to a depth of 2' bgs on 9/11/03 2. Groundwater not encountered 3. Boring backfilled with clean soil 4. Field samples collected at 0', and 1.5' bgs	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						